The EPA Administrator, Lisa P. Jackson, signed the following notice on 10/31/2011, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDSys website (**http://fdsys.gpo.gov/fdsys/search/home.action**) and on Regulations.gov (**http://www.regulations.gov**) in Docket No. **EPA-HQ-OAR-2011-0081**. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR PART 52

[EPA-HQ-OAR-2011-0081; FRL-]

RIN 2060-AQ69

Final Response to Petition From New Jersey Regarding SO_2 Emissions From the Portland Generating Station

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is making a finding that the coal-fired Portland Generating Station (Portland), owned and operated by GenOn REMA LLC (GenOn), in Upper Mount Bethel Township, Northampton County, Pennsylvania, is emitting air pollutants in violation of the interstate transport provisions of the Clean Air Act (CAA or Act). Specifically, the EPA finds that emissions of sulfur dioxide (SO_2) from Portland significantly contribute to nonattainment and interfere with maintenance of the 1-hour SO_2 national ambient air quality standard (NAAQS) in New Jersey. This finding is made in response to a petition submitted by the State of New Jersey Department of Environmental Protection (NJDEP) on September 17, 2010. In this action, the EPA is establishing emission limitations and compliance schedules to ensure that Portland will eliminate its significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey. Compliance with these limits will permit the continued operation of Portland beyond the 3-month limit established by the CAA for sources subject to a contribution finding.

DATES: This final rule is effective on **[INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER**].

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2011-0081. All documents in the docket are listed on the http://www.regulations.gov website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through http://www.regulations.gov or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA West Building, Room 3334, 1301 Constitution Ave., NW, Washington, D.C. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Mr. Todd Hawes (919) 541-5591, hawes.todd@epa.gov, or Ms. Gobeail McKinley (919) 541-5246, mckinley.gobeail@epa.gov, Office of Air Quality Planning and Standards, Air Quality Policy Division, Mail Code C539-04, Research Triangle Park, NC 27711.

SUPPLEMENTARY INFORMATION:

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I. Executive Summary

Section 126(b) of the CAA provides, among other things, that any state or political subdivision may petition the Administrator of the EPA to find that any major source or group of stationary sources in upwind states emits or would emit any air pollutant in violation of the prohibition of section 110(a)(2)(D)(i)[1],42 U.S.C. § 7426(b). On September 17, 2010, NJDEP filed a section 126 petition

[1] The text of section 126 codified in the United States Code cross references section 110(a)(2)(D)(ii) instead of section 110(a)(2)(D)(i). The courts have confirmed that this is a scrivener's error and the correct cross reference is to section 110(a)(2)(D)(i), See Appalachian Power Co. v. EPA, 249 F.3d 1032, 1040-44 (D.C. Cir. 2001).

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requesting that the EPA find that emissions from Portland, located in Upper Mount Bethel Township, Northampton County, Pennsylvania, significantly contribute to nonattainment or interfere with maintenance of the 1-hour SO_2 NAAQS in New Jersey. In this action, the EPA is granting that petition, and basing its finding on the review of NJDEP's air quality modeling, the EPA's independent assessment of the AERMOD[2] dispersion modeling, and other technical analyses. Based on this assessment, the EPA finds that Portland's emissions significantly contribute to nonattainment and interfere with maintenance of the 1-hour SO_2 NAAQS in New Jersey. Pursuant to section 126(c), the EPA is also authorizing continued operation of the plant consistent with emission limitations and compliance schedules (including increments of progress) set forth in this rule to bring the plant into compliance as expeditiously as practicable with the CAA prohibition on emissions that significantly contribute to nonattainment and interfere with maintenance of the 1-hour SO_2 NAAQS. Specifically, the final rule requires Portland to reduce its SO_2 emissions to meet the following limits: 1,105 pounds per hour (lb/hr) for unit 1; 1,691 lb/hr for unit 2; and 0.67 pounds per million metric British units (lb/mmBtu), based on a 30 boiler operating day rolling average, for units 1 and 2. Portland must achieve and maintain these emission limitations by no later than 3 years after the effective date of this rule. The EPA is establishing an interim SO_2 emission limit requirement to ensure that Portland demonstrates appropriate increments of progress toward final compliance. Specifically, no later than 1 year after the effective date of this rule, total SO_2 emissions from units 1 and 2 combined may not exceed 6,253 lb/hr. The final rule also requires Portland to submit to the EPA a dispersion modeling protocol within six months of the effective date of the rule, a modeling analysis demonstrating the elimination of significant

[2] AERMOD stands for the American Meteorological Society/Environmental Protection Agency Regulatory Model.

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contribution to nonattainment and interference with maintenance within 1 year of the effective date of the rule, semi-annual interim progress reports, and a final progress report to demonstrate compliance with the interim and final emission limits. Compliance with the final emission limits established in this rule is sufficient to remedy Portland's significant contribution to nonattainment and interference with maintenance in the impacted areas in New Jersey.

II. Summary of Changes from the April 7, 2011 Proposed Rule

The following is a summary of the significant changes made since proposal. Each of these changes is discussed later in this notice, and, where noted, additional information is provided in other supporting documentation in the docket for this rulemaking. The first change is that the final compliance remedy now includes a heat input-based SO_2 emission limit of 0.67 lb/mmBtu for units 1 and 2, in addition to the proposed SO_2 emission rate limits. The heat-input based SO_2 emission limit is based on a 30 boiler operating day rolling average. This additional requirement was made to address concerns raised by commenters that the proposed compliance remedy was not adequate to ensure attainment of the NAAQS in New Jersey. This issue is discussed in more detail in section V.

Second, the interim emission rate limits, proposed as 2,910 lb/hr for unit 1 and 4,450 lb/hr for unit 2, and having a compliance date of no later than 1 year from the effective date of this rule, are now expressed as a single limit for units 1 and 2 combined, and may not exceed 6,253 lb/hr. The 1-year compliance timeframe remains unchanged. This change to the limit is partly in response to comments (including those from GenOn) in support of greater operational flexibility, and acknowledges that the interim limit need not be unit specific. It is also based on the availability of lower sulfur coal than the coal Portland is currently using. Additional details are provided in section VI.C.

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Third, in response to comments that the proposed deadlines for submitting a modeling protocol and modeling analysis were too short, the deadline for submitting the modeling protocol is changed to six months after the effective date of this rule, and the requirement to submit a modeling analysis is changed to 12 months after the effective date of this rule. This will allow Portland more time for planning its modeling analysis but does not change the compliance time frames for meeting the emission limits.

Additionally, in response to comments suggesting the plant needed more than 90 days to determine a method of compliance, the final rule gives Portland 12 months from the effective date to indicate how it intends to achieve full compliance. The EPA agrees that the plant may need 12 months to identify the specific engineering and technology decisions to determine how to reach compliance within 3 years. Accordingly, we are eliminating the proposed requirement for Portland to notify the EPA, within 90 days from the effective date of this rule, whether the plant will continue to operate and comply with the emission limits and compliance schedules, or cease operations. The modeling protocol and the initial semi-annual progress report, due 6 months after the effective date of this rule, will appropriately inform Portland's plans for continuing operation. Finally, the EPA is not requiring separate compliance schedules and analyses should Portland decide to permanently cease operation of unit 1 and unit 2 as a means of compliance. The final and interim emission limits and compliance schedules are appropriate regardless of how Portland ultimately decides to meet them. Thus, we decided it was not necessary, as proposed, to include a separate schedule specifically for a compliance approach based on shutting down.

III. The EPA's Basis for Making the Section 126 Finding for Portland

A. CAA Section 126(b) and our Legal Authority

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The statutory authority for this action is provided by the CAA, as amended, 42 U.S.C. 7401 et seq. Section 126 of the CAA provides that any state or political subdivision may petition the Administrator of the EPA to find that any major source or group of stationary sources in upwind states emits or would emit any air pollutant in violation of the prohibition of section 110(a)(2)(D)(i). 42 U.S.C. 7426(b). If the EPA makes such a finding, in order to allow continued operation of the source, the EPA may also issue emission limits and compliance schedules (including increments of progress) to bring the source into compliance as expeditiously as practicable but no later than 3 years from the date of the finding. Absent such emission limits and a compliance schedule, the source may not continue operations beyond 90 days.

Section 110(a)(2)(D) of the CAA, often referred to as the "good neighbor" or "interstate transport" provision of the Act, addresses interstate transport of air pollution. Under section 110(a)(2)(D)(i), emissions in one state that contribute significantly to nonattainment in, or interfere with maintenance of a NAAQS by, any other state, or interfere with measures required to be included in the applicable implementation plan for any other state under part C to prevent significant deterioration of air quality or to protect visibility, are to be prohibited. 42 U.S.C. 7410(a)(2)(D)(i). Findings by the Administrator, made pursuant to section 126, that a source or group of sources emits air pollutants in violation of the section 110(a)(2)(D)(i) prohibition are commonly referred to as section 126 findings. Similarly, petitions submitted pursuant to this section are commonly referred to as section 126 petitions. This action responds to a section 126 petition submitted by the NJDEP. In this action, the EPA makes a section 126 finding with respect to Portland and establishes emission limits and compliance schedules to permit continued operation of the plant.

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Several commenters asserted that the EPA cannot, or should not, make such a section 126 finding at this time, but can only make such a finding after the state has submitted what is usually referred to as its "interstate transport" or section 110(a)(2)(D) State Implementation Plan (SIP). For the recently promulgated 1-hour SO_2 standard, those SIPs are due on June 3, 2013. We disagree with this interpretation of the Act. The plain language of the statute confirms that section 126 remedies can, and in some cases must, be promulgated prior to the deadline for states to make SIP submissions under section 110(a)(2)(D).

The EPA has consistently interpreted the language in section 126 as referring to a functional prohibition on emissions. This interpretation is supported by the plain language of the statute, the statutory structure, and the legislative history. Further, the EPA notes that the statute does not exempt, for any period of time, violations of the prohibition from scrutiny under section 126. For these reasons, the EPA believes its interpretation is compelled by the statutory language. Nonetheless, to the extent that the statutory language is ambiguous, the EPA's reasonable interpretation of this language is to be accorded deference.

The EPA interprets the language in section 126 as referring to the actual functional prohibition of section 110(a)(2)(D)(i) that bars impermissible interstate transport. The EPA does not agree with the position taken by some commenters that the language refers only to an emissions limitation contained in a state's section 110(a)(2)(D) SIP. Further, there is nothing in the statute to support the argument that the prohibition on emissions does not arise until after the SIP submission deadline, or that a violation of the functional prohibition cannot occur before that deadline. Where the EPA finds such a violation exists, it must, under section 126, issue emission limits and compliance schedules to permit continued operation of the source.

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The EPA's interpretation of section 126 acknowledges that Congress created two independent statutory tools – section 110(a)(2)(D)(i) and section 126 – to address the problem of interstate pollution transport. The purpose of each provision is to control upwind emissions that contribute significantly to downwind states' nonattainment or maintenance problems. The two provisions differ in that one relies on state regulation and the other relies on federal regulation. Congress provided both provisions without indicating any preference for one over the other, suggesting it viewed either approach as a legitimate means to produce the desired result. Instead, the statutory language creates two independent tools to address the problem. Section 110(a)(2)(D)(i) establishes an obligation for all states to address emissions within the state significantly contributing to downwind air quality problems or interfering with certain regulatory provisions in downwind states. Section 126 establishes a procedure for a state, or political subdivision, to petition the EPA to take federal action to address transported emissions from an identified source or group of sources in another state. The two provisions are independent, and nothing in the statute suggests that one is intended to limit the other.

In general, statutes are to be interpreted in a way that gives meaning to each section. The EPA's interpretation of section 126 is consistent with this general rule in that it gives section 126 a purpose independent of the other remedies available under the CAA. In contrast, if section 126 were interpreted as referring only to a prohibition contained in a SIP, the section would not have any practical utility in the statutory scheme. The EPA's interpretation of the relationship between sections 126 and 110 is supported by the legislative history of the amendments to the CAA which added section 126. In adopting the section 126 remedies, Congress explained that the petition process was intended to provide an avenue for relief separate from the 110(a)(2)(D) SIP procedure and that it was intended to expedite, not delay, resolution of interstate pollution conflicts.

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The EPA's interpretation of the "prohibition" referred to in section 126 is also consistent with the language of section 110(a)(2)(D)(ii), which requires states to include in their SIPs provisions necessary to ensure compliance with sections 126 and 115 of the CAA, which relate to interstate transport and international transport of pollution, respectively. States are required to submit to the EPA such SIPs no later than 3 years after promulgation of a new or revised NAAQS. 42 U.S.C. 7410(a)(1). Thus, pursuant to section 110(a)(2)(D)(ii), any emission limits and compliance schedules issued by the Administrator under section 126 prior to that deadline must be incorporated into the section 110(a)(2)(D) SIP submission for the state in which a source subject to such limits is located. Accordingly, the statute anticipates that the Administrator may address a section 126 petition prior to the deadline for the initial submission of a section 110(a)(2)(D) SIP.

If Congress had intended to limit the EPA's authority to act on section 126 petitions until after the deadline for states to submit 110(a)(2)(D) SIPs, it could have included such a restriction. However, the plain language of the statute does not clearly require this interpretation. Rather, the statute requires the EPA to address a section 126 petition within 60 days after receipt.[3] Since the statute establishes firm deadlines for action on section 126 petitions, it does not provide an exception for petitions submitted prior to the good neighbor SIP submission deadline, and it provides a mechanism for incorporating reductions required in response to section 126 petitions into the state SIPs; the EPA believes it does not have discretion to delay action on a section 126 petition just because the state SIP submission deadline has not yet passed.

The EPA's interpretation of sections 110 and 126 in this context is also reasonable as it is consistent with the EPA's interpretation of these sections in two rulemakings issued in May 1999 and

[3] This deadline can be extended by up to 6 months pursuant to section 307(d)(10).

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January 2000 which concluded that each section of the Act provides an alternative avenue for relief. Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport, 64 FR 28250 (May 25, 1999); Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport, 65 FR 2674 (Jan. 18, 2000). NJDEP has, in this case, sought relief via section 126 from the interstate transport of pollution that is significantly contributing to nonattainment within the state, and the EPA is obligated to address NJDEP's petition pursuant to the requirements of the Act.

B. Summary of Comments and Responses Regarding Legal Authority

Comment: Several commenters argue that the statutory text is unambiguous in requiring that states be permitted to submit their infrastructure SIPs addressing the transport requirements of section 110(a)(2)(D) before a section 126 petition can be filed.

The commenters primarily argue that this interpretation is compelled because a section 126 petition may only be filed to complain of a violation of a section 110(a)(2)(D) SIP where a state has failed to adequately enforce its own plan. Accordingly, the commenters argue that there is no prohibition of transport emissions absent an approved SIP. The operative language in section 126 is that a petition may be granted where there is "a violation of the prohibition of" section 110(a)(2)(D)(i). The commenters argue that "prohibition" referred to in section 126 is not on the act of emitting or contributing to transboundary nonattainment. Rather, the commenters assert, the prohibition is against emitting at levels that violate the limits imposed by the SIP regulations promulgated in response to the requirements of the CAA.

Some of these commenters also suggest that a section 126 petition would be justified where a state fails to meet its SIP revision obligations under section 110(a)(2)(D). These commenters therefore

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argue that a section 126 petition may not be filed until the state fails to meet its deadline to file a SIP addressing its transport obligations with respect to the new or revised NAAQS.

Response: The EPA does not agree that the interpretation posited by the commenters is reasonable much less compelled by the statutory text. Nothing in the statutory language in section 126 prohibits a downwind state from filing a section 126 petition until after the upwind state, in which the source or sources are located, has submitted, or is required to submit, a section 110(a)(2)(D) SIP to the EPA for approval. The commenters have not identified any statutory provision that so limits a downwind state's rights. Rather, the right of a state to file a section 126 petition does not have any time limitation, and the EPA is required to act quickly whenever presented with such a petition. The commenters' arguments that a section 126 petition cannot be filed, or a section 126 finding cannot be made, before the 110(a)(2)(D) SIP submission deadline passes are policy arguments with no basis in the statutory text. Instead, as discussed below, the statutory text, the structure of the CAA, and the legislative history all support the EPA's interpretation of the Act as creating, in sections 110 and 126, two independent means of controlling transboundary emissions and find no support for the argument that one should be prioritized over the other.

Moreover, the plain language of the statute does not clearly define "prohibition" to mean a SIP provision that sets emissions limits to address transboundary air pollution. Rather, the EPA believes that the better interpretation, in light of the structure of the CAA and its legislative history, is that the "prohibition" referred to in section 126 is the actual, functional prohibition on transboundary air pollution contained in section 110(a)(2)(D)(i).

The commenters' interpretation of the "prohibition" referred to in section 126 would render the relief provided by a section 126 petition process essentially meaningless. If a source is emitting in

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violation of an emission limitation in a SIP, there is no question that the source is in violation of the SIP. The language in section 126 stating that "it shall be a violation of * * * the applicable implementation plan" for a source to emit in violation of the prohibition of section 110(a)(2)(D) serves no legal purpose where the source is already directly violating a SIP requirement. By contrast, under the EPA's interpretation, section 126 deems a source's emissions to be a violation of the applicable SIP (as well as of section 126) whenever the emissions significantly contribute to nonattainment downwind or interferes with maintenance of any NAAQS. This interpretation gives legal effect to the language in section 126 and is consistent with Congress' purpose of providing a tool for downwind states and the EPA to use to impel upwind sources to reduce transported emissions even where a SIP may not yet directly regulate such emissions.

Moreover, the EPA's interpretation of section 126 gives it a purpose independent of the other remedies available under the CAA. Under section 113, upon finding that any person is in violation of any requirement of an approved SIP, the EPA has the authority to enforce the requirement by issuing an order to comply, issuing an administrative penalty order, or bringing a civil action. In addition, any person (which includes states) may bring a citizen suit against any person in violation of any requirement of an approved SIP, independent of the EPA action. Section 304(a), (f); see also section 302. These provisions provide more direct and likely quicker recourse against a source that is violating its SIP-imposed emission limits than the section 126 petition process would. Thus, there is no need to have a petition, public hearing, and EPA determination pursuant to section 126 simply to enforce existing SIP limits. By contrast, using the section 126 petition process where transboundary emissions are not yet being controlled by an upwind state serves the unique role of allowing a downwind state to

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force the EPA's consideration of the problem and potentially achieve emissions reductions directly from sources, without the need to depend on action by the upwind state.

The EPA's interpretation of the relationship between sections 126 and 110 is expressly supported by the legislative history of the CAA. In adopting the section 126 remedies, Congress explained that the petition process was intended to provide an avenue for relief separate from the section 110(a)(2)(D) SIP procedure:

> This petition process is intended to expedite, not delay, resolution of interstate pollution conflicts. Thus, it should not be viewed as an administrative remedy which must be exhausted prior to bringing suit under section 304 of the act. Rather, the committee intends to create a second and entirely alternative method and basis for preventing and abating interstate pollution. The existing provision prohibiting any stationary source from causing or contributing to air pollution which interferes with timely attainment or maintenance or [sic] a national ambient air standard (or a prevention of significant deteriorating [sic] or visibility protection plan) in another state is retained. A new provision prohibiting any source from emitting any pollutant after the Administrator has made the requisite finding and granted the petition is an independent basis for controlling interstate air pollution.

H. Rep. 95-294 at 305, reprinted in 1977 Legislative History at 2798. Nothing in the legislative history suggests, as the commenters assert, that the section 126 remedy is dependent on the section 110 SIP procedure. Rather, this language clearly indicates that Congress intended sections 110 and 126 to operate as independent means of controlling transboundary emissions and that it did not intend to prioritize one means of control over the other. Accordingly, there is no basis in the legislative history to support the commenters' argument that a state does not have the right to submit a section 126 petition until after the deadline to submit a section 110(a)(2)(D) SIP has passed. To the contrary, the legislative history supports the conclusion that Congress did not intend to impose any limitation tied to the section 110(a)(2)(D) SIP procedure on when a state may submit a section 126 petition after a new or revised NAAQS is promulgated.

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Moreover, Congress recognized in adopting all of the interstate transport provisions in the CAA that the interstate pollution problem stems from inadequate limits on transported emissions, and not inadequate compliance with adequate SIP requirements. This characterization of the problem is supported by the numerous descriptions of the interstate pollution problem in the 1977 legislative histories, all of which explicitly or implicitly refer to the lack of upwind limitations and none of which mentions sources' violation of upwind SIP limits. See, e.g,. S. Comm. on Envt. and Public Works, Clean Air Act Amendments of 1977, S. Rep. 95-127, 95th Cong., 1st Sess. 41 (1977), reprinted in 3 1977 Legislative History at 1415 (noting that the 1970 Act failed to specify any abatement procedure if a source in one state emitted air pollutants that adversely affected another state, and "[a]s a result, no interstate enforcement actions have taken place, resulting in serious inequities among several States, where one State may have more stringent implementation plan requirements than another state"); H. Rep. 95-294, 95th Cong., 1st Sess. at 304 (1977), reprinted in 4 1977 Legislative History at 2798 ("[A]n effective program must not rely on prevention or abatement action by the State in which the source of the pollution is located, but rather by the state (or residents of the State) which receives the pollution and the harm, and thus which has the incentive and need to act."). It is reasonable to assume that Congress intended to create a tool that would attack the problem Congress recognized. This supports the conclusion that Congress intended section 126 to provide an alternate means to compel compliance with the prohibition in section 110(a)(2)(D) where upwind states are not controlling transboundary emissions, and not where sources are violating adequate SIP provisions.

The interpretation that the EPA adopts here is also consistent with its historical interpretation of section 126. The EPA previously interpreted this section in two rulemakings issued in 1999 and 2000, wherein commenters challenged the EPA's authority, in light of a pending SIP call, to grant a number of

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section 126 petitions that sought to mitigate the transport of nitrogen oxides (NO_x) from downwind states that were significantly contributing to ozone nonattainment problems in the petitioning states. 64 FR 28250; 65 FR 2674. In both rulemakings, the EPA interpreted the relationship between sections 110 and 126 consistent with the EPA's interpretation here, concluding that the "prohibition" referred to in section 126 is the functional prohibition of section 110(a)(2)(D)(i), as opposed to an emissions limitation contained in a state's SIP, and that the section 110(a)(2)(D) SIP process and the section 126 petition process are independent and alternative means of addressing impermissible interstate transport.

Both rulemakings were challenged in the D.C. Circuit in Appalachian Power Co. v. EPA, 49 F.3d 1032 (2001), on the theories that the agency was required to refrain from making any section 126 findings while the SIP call was ongoing and that the doctrine of "cooperative federalism" embodied in the Act imposed a constraint on the EPA's ability to act before the section 110 process was complete. Id at 1045. The court deferred to the EPA's interpretation of the relationship between sections 110 and 126, holding that there is no inherent conflict in acting on a section 126 petition during the same period that a state has to develop a SIP submission: "It is entirely reasonable for the EPA to regard a state that is under a legal obligation to revise its plan as being, in the meantime, in violation of a functional prohibition." Id. at 1046. The court explained that the petitioners' interpretation of section 126 would compromise three critical provisions of section 126:

1. the requirement that source operate no more than 3 years after finding of contribution to downwind nonattainment;
2. the fact that "relief does not depend upon any action by the upwind states, as is necessary for a SIP revision"; and
3. the fact that relief under section 126 is independent of the discretionary policy preferences of the EPA, as the agency is required act upon a petition within 60 days.

Id. The court noted that the EPA's interpretation retains all three aspects of the statutory requirements. Id. The court therefore concluded that "[b]ecause it is reasonable, and because the 'Congress provided

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both [§§ 110 and 126] without indicating any preference for one over the other,' * * * the EPA's conclusion that these two provisions operate independently merits our deference under Chevron step two." Id. at 1048 (quoting 65 FR at 2680/1).

Thus, the EPA believes that the commenters' interpretation of section 126 is unreasonable and inconsistent with the legislative history, the EPA's past interpretations, and court rulings upholding those interpretations. In particular, the commenters' interpretation would render the relief provided by the section 126 petition process duplicative and unnecessary. The EPA's interpretation, on the other hand, gives legal effect to the language in section 126 and is consistent with Congress' purpose of providing an independent tool for a downwind states and the EPA to use to impel upwind sources to reduce transported emissions. The EPA believes this matter is clearly resolved by reference to the terms of the provision itself, so that under the first step of the Chevron analysis, no further inquiry is needed. If, however, it were concluded that the provision is ambiguous on this point, the EPA believes that, under the second step in the Chevron analysis, then the EPA should be given deference for any reasonable interpretation, as courts have given with respect to prior interpretations of section 126. Interpreting section 126 to refer to a functional prohibition on emissions and to preserve a state's right to file a section 126 petition is reasonable for the reasons described above.

Comment: Several commenters argue that the EPA is turning to section 126 as a "first resort" for implementing the new NAAQS and that we are substituting the EPA's judgment for Pennsylvania's regarding the appropriate control strategy for Portland. The commenters contend that revising Pennsylvania's SIP is a usurpation of state discretion and that the SIP process would be superfluous if we allowed petitions to be filed so close on the heels of new or revised NAAQS. The commenters believe that Congress intended states to have primary responsibility for implementing a new or revised

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NAAQS. They contend that the EPA's interpretation of section 126 places priority on interstate transport over intrastate control of NAAQS attainment.

Response: We respond by noting that the upwind state still retains its obligation to develop a SIP and implement the NAAQS. Applying section 126 independent of an upwind state's failure to act under section 110(a)(2)(D) does not impermissibly pressure upwind states to select certain control measures. The EPA acknowledges that because the section 126 findings precede any required state action, when states are eventually required to submit SIPs to control interstate transport, one of the largest sources of emissions will already be subject to emission control requirements, and, depending upon the timing, may have already invested in controls. Yet this is not a legal constraint on states' choices – it is the reality that, over time, conditions change and different policy choices become more or less attractive for a variety of reasons. States would still be able to choose to regulate other sources, but depending upon the timing, the option of obtaining emission reductions from sources that have already invested in emission controls or have already reduced emissions may be more attractive on policy and economic grounds than regulating those sources otherwise would have been. There is a vast difference between, on one hand, the EPA prescribing a particular emissions control choice that states must adopt, and on the other, taking action required under the CAA to regulate sources directly with the possible effect of making certain future emissions control choices by some states more or less appealing.

Such a potential future effect on the regulatory environment cannot override the obligation that the EPA act on state petitions under section 126. We do not believe it would be reasonable to conclude that the EPA can take no action under an independent mandate of the statute to respond to petitions submitted by downwind states facing their own time constraints and pressures to meet air quality standards, just to preserve the relative attractiveness of a variety of options for control of SO_2 in the

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upwind states required under another provision of the CAA. The cooperative federalism principles of the CAA do not require the EPA to withhold federal action under section 126 until states have been required to and failed to submit SIPs. It is perfectly reasonable for Congress to have established section 126 as an alternative mechanism under the CAA to address the interstate pollution problem, just as it did again in adopting sections 176A and 184. To provide alternatives, the various interstate transport provisions are necessarily different from each other and from other provisions of the Act, but that does not make them inconsistent with other provisions of the Act. Thus, simply because the EPA will have imposed certain requirements on Portland does not mean that Pennsylvania no longer has any discretion in crafting its SIP submission with respect to NAAQS compliance anywhere in the state. Pennsylvania can take into consideration the controls that Portland chooses to implement when creating its own attainment plan, just as it would take into consideration controls implemented at any other source.

The court in Appalachian Power Co. v. EPA specifically addressed this concern that action on the section 126 petition before the SIP submissions were due would restrict the states' discretion to fashion their own plan for complying with the NAAQS: "SIP development, like any environmental planning process, commonly involves decisionmaking subject to various legal constraints. That § 126 imposes one such limitation – and it is surely not the only independent provision of federal law to do so – does not affect a state's discretion under § 110." 49 F.3d at 1047.

Finally, as explained in detail above, Congress intended sections 110 and 126 to operate as independent and alternate means to address transboundary pollution, and indicated no preference for one means of compelling compliance over the other. Thus, the EPA's action on this section 126 petition does not prioritize the control of interstate pollution over a state's control of intrastate pollution. Rather, it gives legal effect to section 126, consistent with the structure of the CAA and the legislative history, by

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providing a tool for downwind states to use to impel upwind sources to reduce transported emissions.

IV. Summary and Assessment of the Modeling and Other Data Relevant to the EPA's Proposed Finding

A. Summary of the Modeling for the Proposed Rule

NJDEP's section 126 petition contained dispersion modeling results, based on both the CALPUFF[4] and AERMOD dispersion models, that NJDEP relied upon to show that emissions from Portland, alone, caused downwind violations of the 1-hour SO_2 NAAQS in New Jersey. Given the magnitude of the modeling violations, which were nearly seven times the 1-hour SO_2 NAAQS based on AERMOD modeling of maximum allowable emissions, and the fact that significant exceedances of the NAAQS were also shown based on modeling of estimated actual emissions, the EPA concluded that the NJDEP had clearly shown that SO_2 emissions from Portland cause violations of the 1-hour SO_2 NAAQS in New Jersey.

The EPA also modeled the emissions from Portland using the AERMOD dispersion model and determined that the modeled concentrations from Portland, when combined with the relatively low background concentrations, cause violations of the 1-hour SO_2 NAAQS in Morris, Sussex, Warren and Hunterdon Counties in New Jersey.[5] This section discusses the key modeling issues that arise in making that determination, and how the EPA is responding to comments we received on those issues. We also note that this modeling is used not only to characterize the NAAQS violations, but, as discussed in section V, it is also used to determine the appropriate remedy to address such violations.

1. Modeling Analysis in NJDEP's Section 126 Petition.

[4] CALPUFF is a non-steady-state puff dispersion model that was originally developed for the California Air Resources Board.

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a. Model selection

Model selection was one of the key issues that the EPA addressed in support of this rule given the critical role played by dispersion modeling both in relation to a finding under a section 126 petition that a source significantly contributes to nonattainment and/or interferes with maintenance of the 1-hour SO_2 NAAQS in a neighboring state, and in relation to the determination of an appropriate remedy to address such a finding. As summarized in the proposed rule and documented in more detail in the EPA's proposed rule Air Quality Modeling Technical Support Document, NJDEP included modeling results based on both the CALPUFF and AERMOD dispersion models with its section 126 petition. The importance of this issue is further highlighted by the fact that the maximum 99th percentile of the daily maximum 1-hour modeled SO_2 concentrations based on CALPUFF was about 2.5 times higher than the maximum 99th percentile of the daily maximum 1-hour modeled concentrations based on AERMOD. Consequently, a much more stringent remedy would be required to address such a finding based on CALPUFF modeling than based on AERMOD modeling.

The NJDEP acknowledged that AERMOD is the preferred model under the EPA's "Guideline on Air Quality Models," published as Appendix W to 40 Code of Federal Regulations (CFR) Part 51, for near-field applications such as this, but suggested that the use of CALPUFF may be appropriate under the alternative model provisions in Section 3.2.2b of Appendix W. Section 3.2 of Appendix W lists three separate conditions under which an alternative model may be approved for use:

(1) If a demonstration can be made that the model produces concentration estimates equivalent to the estimates obtained using a preferred model;

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[5] The EPA modeling analysis is detailed in the proposed rule Air Quality Modeling Technical Support Document, available in Docket ID EPA-HQ-OAR-2011-0081-0026.

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(2) If a statistical performance evaluation has been conducted using measured air quality data and the results of that evaluation indicate the alternative model performs better for the given application than a comparable model in Appendix A of Appendix W; or

(3) If the preferred model is less appropriate for the specific application, or there is no preferred model.

The NJDEP modeling documentation suggested that NJDEP's use of the CALPUFF model in support of this petition was based on condition (2) of Section 3.2.2b, claiming to have shown that CALPUFF "performed better and produced predictions of greater accuracy than AERMOD" for this application. NJDEP also claimed that the use of CALPUFF is more appropriate for this specific application due to the complex winds addressed in Section 7.2.8 of Appendix W and is therefore justified under condition (3) of Section 3.2.2b.

The section 126 petition referenced a CALPUFF model validation study based on the Martin's Creek field study database, submitted by NJDEP with an earlier section 126 petition, as demonstrating that "CALPUFF performed better and produced predictions of greater accuracy than AERMOD" for this application.[6]

At proposal, the EPA included a detailed assessment of the NJDEP CALPUFF validation study as Appendix A of the proposed rule Air Quality Modeling TSD, and concluded that NJDEP had not adequately justified the use of CALPUFF in this application under either conditions (2) or (3) of Section 3.2.2b of Appendix W. The EPA further asserted that AERMOD is the most appropriate model for this

[6] See Letter from Bob Martin, Commissioner, New Jersey Department of Environmental Protection (NJDEP) to Lisa P. Jackson, Administrator, USEPA (September 13, 2010), Section IV, page 5. Docket ID No. EPA Docket, EPA-HQ-OAR-2011-0081-009.

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application. Our assessment of the CALPUFF validation study identified several aspects of NJDEP's validation methodology that deviated from the EPA's Protocol for Determining the Best Performing Model,[7] which undermined the integrity of the evaluation results. In addition, we cited the "weight of evidence" regarding AERMOD model performance which is based on evaluations for a total of 17 field study databases as compared to NJDEP's CALPUFF validation study which is the only near-field evaluation of CALPUFF model performance that the EPA is aware of that included CALMET-generated 3-dimensional wind fields. We also pointed to the fact that the 1-hour, 3-hour and 24-hour quantile-quantile (Q-Q) plots of modeled versus observed concentrations for AERMOD and CALPUFF included in the NJDEP validation study suggested that the performance of the CALPUFF and AERMOD models was very similar for this database, with both models exhibiting generally good agreement with observations, but with AERMOD showing slightly better overall agreement than CALPUFF. These clear visual comparisons of model performance are difficult to reconcile with NJDEP's assertion that CALPUFF performed better than AERMOD.

b. Meteorological data

Another key component of the dispersion modeling analysis is the meteorological data. The EPA based the AERMOD modeling in support of the proposed rule on 1 year of Portland site-specific meteorological data available for July 1993 through June 1994. The site-specific meteorological data were collected from a 100-meter instrumented tower and Sound Detection and Ranging instrument (SODAR), located about 2.2 kilometers west of Portland. Based on a review of the data, we determined that the Portland meteorological data from 1993-94 meet the basic criteria for representativeness under

[7] Protocol for Determining the Best Performing Model. EPA-454/R-92-025 (1992). U.S. Environmental Protection Agency, Research Triangle Park, NC, available at: http://www.epa.gov/ttn/scram/guidance/guide/modleval.zip.

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Section 8.3.3 of Appendix W, and therefore can be considered as site-specific data for purposes of modeling impacts from the elevated stacks for Portland units 1 and 2. The 1993-94 data also meet the minimum criterion for the length of meteorological data record of at least 1 year of site-specific meteorological data recommended in Section 8.3.1.2 of Appendix W. However, the difference of about 100 meters in the base elevation for the meteorological tower versus the stack base elevation raised concerns regarding how the meteorological data were input to the AERMOD model in the NJDEP modeling analysis given that the stack heights for units 1 and 2 are about 122 meters and that plume heights of concern for units 1 and 2 are about 200 to 400 meters above stack base.

The AERMOD modeling submitted by NJDEP used the measurement heights above local ground at the tower location for the meteorological data input to the model, effectively assuming that the measured profiles of wind, temperature and turbulence are "terrain-following." Without adjusting for the difference in base elevation of about 100 meters between the meteorological data and the stacks, wind speeds are likely to be biased high and the wind directions may not be representative of plume heights relative to stack base. A review of the raw meteorological data files for Portland also revealed the fact that σ_w (vertical turbulence) data were available from the SODAR, but had not been used in the AERMOD modeling submitted with NJDEP's section 126 petition. Based on the analyses that are described in more detail in the EPA proposed rule Air Quality Modeling TSD, the EPA concluded that the representativeness of the Portland meteorological data would be improved by incorporating some adjustments to the measurement heights from the SODAR data and the inclusion of the σ_w data collected from the SODAR.

2. The EPA's Modeling Analysis to Quantify Significant Contribution

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In the EPA AERMOD modeling analysis, thousands of receptors were placed in New Jersey to determine the area of maximum concentration from Portland's emissions in order to quantify Portland's significant contribution to nonattainment in New Jersey. A design value concentration was calculated for each receptor for comparison to the NAAQS. The design value concentration is equal to the 99th percentile (4th-highest) of the annual distribution of daily maximum 1-hour SO_2 concentrations. All receptors with modeled design value concentrations that are greater than the NAAQS [196.2 micorgrams per cubic meter (ug/m^3)][8] are determined to be nonattainment receptors.

The EPA proposed to define Portland's significant contribution to nonattainment and interference with maintenance as those emissions that must be eliminated to bring the downwind receptors in New Jersey affected by Portland into modeled attainment in the analysis year. While this approach would not be appropriate in every circumstance, the EPA believes it is appropriate where, as here, the source's emissions are sufficient on their own to cause downwind NAAQS violations and background levels of the relevant pollutant are relatively low. The EPA therefore developed a methodology to identify the reductions necessary to bring the downwind receptors into attainment.

To quantify the emissions that constitute Portland's significant contribution, the EPA identified the level of emissions that need to be reduced to ensure that no modeled concentration within the affected area (in New Jersey) exceeds the level of the NAAQS (i.e., the 99th percentile of the daily maximum 1-hour average of 196.2 ug/m^3).

The EPA also analyzed the modeling results to determine the appropriate emissions reductions that were needed to eliminate "interfere with maintenance." In addition to nonattainment receptors, the EPA also attempted to identify receptors that are modeled to be attainment but due to variability in

[8] The 1-hour SO_2 NAAQS is 75 ppb. For comparison to dispersion modeling results in units of ug/m^3,

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meteorology or emissions might be at risk for nonattainment. Due to the high modeled concentrations from Portland's emissions, all of the downwind modeled receptors in the final modeled receptor grid in New Jersey are modeled to be nonattainment. In this application, it was not necessary to expand the modeling grid to identify additional nonattainment or "maintenance only" receptors because the modeling domain was focused on the receptors with the maximum impact from Portland. Therefore, the EPA did not identify any "maintenance only" receptors.

In the proposal, the EPA considered whether Portland should be required to make additional reductions, above and beyond those required to eliminate its significant contribution to nonattainment, to ensure that it does not interfere with maintenance of the 1-hour SO_2 NAAQS in violation of the prohibition in section 110(a)(2)(D). We identified an approach that we believe is appropriate for these specific circumstances. Among other things, we considered the nature of the modeling used to determine the appropriate remedy and the potential for actual SO_2 concentrations in New Jersey to be higher than those modeled. In the proposal, the EPA determined there is no indication that concentrations higher than those modeled from Portland would be likely to occur at nonattainment and/or maintenance receptors or anywhere else in New Jersey. This was based on the following facts:

1. There is only 1 year of site-specific meteorology available, such that we were not able to explicitly examine the impact of year-to-year variability of meteorology on downwind modeled concentrations[9].

2. The remedy modeling used maximum allowable emissions from Portland. Since these are the highest emissions that are allowed to be emitted by the facility, higher

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the NAAQS can be expressed as 196.2 ug/m^3, assuming reference temperature and pressure.

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concentrations could not be expected to occur in New Jersey due to the variability of emission from Portland.

3. In the modeling analysis, we used background concentrations that varied by season and hour of day based on the 3-year average of the 99th percentile of the distribution of hourly SO_2 concentrations in the area, which represents the high end of the distribution of monitored background concentrations. The background concentration accounts for contributions from other SO_2 sources. As demonstrated by NJDEP's trajectory analysis,[10] it is likely that SO_2 impacts from Portland contributed to some of the high monitored concentrations at the Chester, New Jersey, monitor used to represent the background concentrations, which is located about 34 kilometers east-southeast of Portland. Although use of the 99th percentile values by season and hour of day from the Chester, New Jersey, monitor eliminated some of the peak hourly SO_2 concentrations, the background concentrations are still likely to be somewhat conservative (high) to account for variability that otherwise cannot be quantified.

It was therefore reasonable to conclude, under the circumstances, that any remedy that eliminates the significant contribution to nonattainment from Portland also eliminates its interference with maintenance with respect to year-to-year variability in emissions and meteorology. The EPA therefore proposed to find that compliance by Portland with the proposed emission limits will bring it into

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[9] Due to constraints on data availability, our analysis is appropriate in this instance; however, nothing here is intended to suggest that, where sufficient data are available to examine year-to-year variability, this should not be a relevant factor.

[10] See Trajectory Analysis of High Sulfur Dioxide Episodes at the Chester, NJ Monitor. Bureau of Technical Services, Division of Air Quality, New Jersey Department of Environmental Protection. July 30, 2010. Submitted to USEPA as Exhibit 4 of the September 13, 2010 Supplement to New Jersey's

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compliance with the prohibition on emissions that significantly contribute to nonattainment of the 1-hour SO_2 NAAQS as well as with the prohibition on emissions that interfere with maintenance in a downwind area. The EPA requested comments on our modeling methodology and meteorological data adjustments.

B. Public Comments Related to the Modeling

We received many public comments related to the modeling that was used to support the finding that SO_2 emissions from Portland contribute significantly to nonattainment and interfere with maintenance of the 1-hour SO_2 NAAQS in New Jersey. Some of the main comments and the EPA's responses related to model selection, meteorological data, emissions and source characteristics, and background concentrations are summarized below, with further details provided in the Response to Comments document.

1. Model Selection

Comments: We received several comments supporting the EPA's conclusion that AERMOD is the appropriate dispersion model for this petition, and that also supported the EPA's overall assessment that NJDEP's CALPUFF validation study failed to demonstrate that CALPUFF performs better for this application than AERMOD. One commenter (NJDEP) believes that the modeling in support of the section 126 petition should be based on CALPUFF, and provided detailed comments on the EPA assessment of the CALPUFF validation study.

Response: As discussed in greater detail in the final rule Air Quality Modeling technical support document (final rule Modeling TSD), the EPA review of NJDEP's comments related to our assessment of the CALPUFF validation study has identified additional deficiencies with the study that further

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undermine NJDEP's conclusion that "CALPUFF performed better and produced predictions of greater accuracy than AERMOD" for this application. One of these deficiencies that came to light upon closer examination of the CALPUFF modeling files for the validation study is that NJDEP used the "ISC Type" option for building downwash in CALPUFF instead of the PRIME[11] downwash option when applying CALPUFF for the Martin's Creek validation study, although the CALPUFF input file included the necessary building input parameters to run the PRIME option. The AERMOD modeling results for Martin's Creek used for comparison were based on the PRIME downwash algorithm. While building downwash associated with the cooling towers at Martin's Creek exhibited only a modest influence on results based on AERMOD evaluations, it is important enough to be treated properly in the model evaluation, and the EPA concludes that the PRIME downwash option should have been used in the CALPUFF modeling since AERMOD's promulgation effectively established the PRIME algorithm as the "preferred" downwash algorithm for near-field applications. NJDEP's CALPUFF validation report identifies that the "ISC type" downwash option was used in the table of CALPUFF inputs (the MBDW parameter in Table 8.2), but provides no explanation or justification for not using the PRIME downwash option. As described in more detail in the final rule Modeling TSD, the inclusion of the PRIME downwash option in CALPUFF resulted in a greater tendency for CALPUFF to overestimate concentrations at Martin's Creek as compared to the "ISC-Type" downwash option, with some deterioration in model performance metrics.

EPA Docket, EPA-HQ-OAR-2011-0081-008.

[11] The "ISC Type" building downwash option in CALPUFF refers to the Huber-Snyder and Schulman-Scire algorithms that are incorporated in the Industrial Source Complex Short Term (ISCST3) model. The PRIME downwash option refers to the "Plume Rise Model Enhancements" algorithms that were initially incorporated into a revised version of ISCST3 called ISC-PRIME, and were later incorporated into the AERMOD model prior to its promulgation as the EPA-preferred model for near-field applications, replacing ISCST3, in 2005.

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Additional evidence supporting the EPA's determination that AERMOD is a more appropriate model for this application than CALPUFF was provided by an EPA analysis of high modeled SO_2 concentrations versus high observed SO_2 concentrations at the Columbia Lake Wildlife Management (Columbia) air quality monitor located in New Jersey about 2 kilometers northeast of Portland. The EPA compared the observed SO_2 data from September 2010 through September 2011 to modeled concentrations from AERMOD and CALPUFF. Although the monitored concentrations are based on a different period than the modeled concentrations (1993-94 in the case of AERMOD, and 1992-93, and 2002 for CALPUFF), it is reasonable to expect some degree of comparability between modeled and monitored concentrations based on the upper end of the ranked concentration distributions. These comparisons, which were patterned after comparisons presented in NJDEP's trajectory analysis report for the Columbia monitor[12]and are described in more detail in the final rule Modeling TSD, show generally good agreement with observations based on AERMOD modeling, utilizing the EPA's adjustments[13] to the 1993-94 site specific meteorological data for Portland. The EPA analysis used an emission scenario of 100 percent load and 70 percent of allowable emissions for Portland units 1 and 2, which is representative of peak operating conditions for Portland during the period of monitoring data and reflects the fact that the sulfur content of the fuel being burned at Portland was typically about 70 percent of the allowable sulfur content. Since Portland frequently operates well below these levels, we would expect to see some bias toward overestimation in the modeled concentrations, and the AERMOD predictions are consistent with that expectation. The average ratio of predicted to observed

[12] Analysis of the Sulfur Dioxide Measurements from the Columbia Lake, NJ Monitor. Bureau of Technical Services, Division of Air Quality, New Jersey Department of Environmental Protection, March 4, 2011. Docket ID No. EPA-HQ-OAR-2011-0081-0019.

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concentrations for the top 10 daily maximum 1-hour values was 1.14. By comparison, the average predicted/observed ratio for AERMOD for the same emission scenario using NJDEP's meteorological data for Portland without the EPA's adjustments was 0.77. The modeled concentrations are based on both units 1 and 2 operating at 100 percent load and 70 percent of allowable emissions, without any contribution from background concentrations. The relatively good model performance for AERMOD is in contrast to a large over-prediction when CALPUFF results are compared to observed SO_2 at the Columbia monitor. The average predicted/observed ratios for CALPUFF were about 3.26 for the 1992-93 meteorological data and 3.87 for the 2002 meteorological data. Additional details regarding these analyses related to the Columbia monitoring data are provided in the EPA final rule Modeling TSD.

2. Meteorological Data

Comments: GenOn submitted comments indicating general agreement with the EPA adjustments to the Portland meteorological data, although it recommended also including the turbulence data from

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[13] As documented in Appendix B of the EPA proposed rule Air Quality Modeling TSD, the EPA adjusted some of the measurement heights from the SODAR data and also included the SODAR-derived σ_w data.

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the 30-meter level on the instrumented tower, including both σ_w and σ_θ (lateral turbulence), which had been excluded from the EPA modeling in support of the proposal.

Response: We disagree with GenOn's recommendation to include the 30-meter turbulence data due to the concerns regarding the representativeness of such data, which are documented in the proposed rule Air Quality Modeling TSD. The EPA explained that it excluded the 30-meter turbulence data due to concerns regarding the representativeness of the data at that level relative to stack base elevation given that the measurement heights from the 100-meter tower were not adjusted and would therefore be treated as being representative of meteorological conditions within the valley.

We also note that inclusion of the 30-meter turbulence data would have a negligible effect on the modeling results since the elevated plumes from Portland units 1 and 2 will be well above 30 meters such that transport and dispersion of the plumes will be determined by measurements at higher levels from the tower and SODAR. Therefore, the 30-meter turbulence data is only expected to influence the plumes in the rare cases where turbulence data were missing from the 100-meter level on the tower and from the SODAR. Due to the representativeness issues, we believe it would be inappropriate to rely on the 30-meter turbulence data in those cases.

Comment: NJDEP submitted detailed comments opposing the EPA's adjustments to the Portland meteorological data, as well as other aspects of the meteorological data processing. NJDEP's opposition to the EPA adjustments to Portland meteorological data primarily concerned past precedents regarding prior modeling analyses based on the data, the lack of field study evaluation results validating the use of SODAR-derived σ_w data in AERMOD, and the fact that the net effect of the meteorological data adjustments incorporated in the EPA modeling reduced the overall modeled design value by about 40 percent as compared to the AERMOD modeling results submitted by NJDEP with the section 126

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petition.

Response: Regarding the exclusion of SODAR-derived σ_w data in past analyses, we noted that the EPA meteorological monitoring guidance prior to 2000 discouraged the use of SODAR-derived turbulence data, including σ_w. However, we also note that the updated guidance issued by the EPA in 2000[14] supports the use of SODAR-derived σ_w based on additional analyses of SODAR versus tower-based σ_w data. Furthermore, as mentioned above in relation to the issue of model selection and as documented in more detailed in the final rule Modeling TSD, additional analyses based on model-to-monitor comparisons against the Columbia, New Jersey, ambient SO_2 data show much better agreement between modeled and monitored concentrations based on the EPA-adjusted meteorological data than for the unadjusted data used by NJDEP in its AERMOD modeling, which tends to corroborate the EPA adjustments to the meteorological data. As shown in NJDEP's trajectory analysis for the Columbia monitor (NJDEP, March 4, 2011) and further documented in the final rule Modeling TSD, AERMOD modeling based on the unadjusted data used by NJDEP exhibits a tendency to underestimate ambient concentrations as compared to the Columbia monitored data. Although these analyses lend some credence to the appropriateness of the EPA meteorological data adjustments, we believe that the adjustments are fully justified based on current EPA meteorological monitoring guidance as well as technical considerations, in relation to the approximately 100 meter difference between the base elevation of the meteorological tower/SODAR and the base elevation of the Portland stacks as documented in more detail in the EPA final rule Modeling TSD.

[14] Meteorological Monitoring Guidance for Regulatory Modeling Applications, EPA-454/R-99-005 (February 2000). U.S. Environmental Protection Agency, Research Triangle Park, NC, available at: http://www.epa.gov/ttn/scram/guidance/met/mmgrma.pdf

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Regarding the fact that the maximum 99th percentile 1-hour SO_2 modeled design value based on the EPA analysis including adjustments to the meteorological data was about 40 percent lower than the maximum 99th percentile design value based on the NJDEP AERMOD modeling (1,402 ug/m^3 versus 851 ug/m^3), we also note that the EPA-modeled results are in fact higher than the NJDEP results across most of the final modeled domain. More specifically, the EPA modeled results are higher than the NJDEP results for about 96 percent of the modeled receptors in the final 100-meter receptor grid, and the average difference across all receptors was about 44 percent higher based on the EPA modeling.

Based on this review of comments submitted regarding the EPA adjustments to the Portland meteorological data and in light of additional evidence supporting the appropriateness of the adjustments based on model-to-monitor comparisons for the Columbia, New Jersey, ambient monitor, no changes relative to the proposal have been made to the meteorological data used in the EPA AERMOD modeling in support of this final action.

Comment: A few commenters raised concerns regarding the fact that the EPA AERMOD modeling relied upon a single year of site-specific meteorological data. One commenter suggested that a more conservative estimate of the modeled design value used compensated for this, such as the highest second-highest concentration rather than the 99th percentile of the annual distribution of the daily maximum 1-hour values. Similarly, another commenter suggested use of the highest possible concentration as being the most conservative value.

Response: These comments regarding the limitations in the amount of meteorological data used in support of the proposed rule relate to the issue of whether the Portland emissions may interfere with

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maintenance of the NAAQS due to variability of meteorological conditions[15]. Although we are not able to explicitly account for the impact of year-to-year variability of meteorology on downwind modeled concentrations, the form of the 1-hour SO_2 NAAQS based on the 99th percentile of the annual distribution of daily maximum 1-hour values, averaged across 3 years for monitoring data, is recognized as a more stable metric of ambient air quality that is less sensitive to meteorological variability than a deterministic standard that would be based on allowing one exceedance per year. For a deterministic standard, the inclusion of additional years of meteorological data can only increase the modeled design value or leave it unchanged, since the design value is the highest of the second-highest values across each of the individual years modeled. In contrast, the inclusion of additional years of meteorological data for a probabilistic standard such as the 1-hour SO_2 NAAQS may increase or decrease the modeled design value since it is averaged across the number of years modeled at each modeled receptor.

To further illustrate this point, the EPA performed an analysis of impacts from Portland based on 5 years of meteorological data from the Allentown National Weather Service (NWS) station for the period 2006 through 2010. This analysis shows that the range of variability between the individual year with the lowest modeled design value and the 5-year average modeled design value is about 6 percent. For comparison, using the same 5 years of meteorology data, the range of variability across the 5 years for a deterministic 1-hour standard was about 35 percent for the first highest 1-hour values and about 17 percent for the highest second-highest 1-hour values. More details regarding these analyses are provided in the final rule Modeling TSD.

[15] The use of 1 year of site-specific meteorological data fulfills the requirements of Appendix W related modeling demonstrations of compliance with the NAAQS. The commenters are addressing the issue of interference with maintenance.

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We also note that variability in relation to interference with maintenance also encompasses variability in emissions. As noted above, the modeling conducted to determine the proposed remedy for Portland was based on maximum allowable emissions. Since these are the highest emissions that are allowed to be emitted by the facility, higher concentrations could not be expected to occur in New Jersey due to the variability of emissions from Portland. Furthermore, analysis of continuous emissions monitoring systems (CEMS) data for Portland indicates a much larger range of potential variability associated with emissions than was found for meteorological variability based on the analysis summarize above.

Regarding variability in relation to emissions from other sources of SO_2 that might overlap with impacts from Portland, we believe that we have adequately addressed this aspect of variability associated with emissions from existing sources through the inclusion of a relatively conservative monitored background concentration in the cumulative modeling analysis, as discussed in more below in section IV.B.4. Furthermore, background ambient concentrations of SO_2 due to existing sources are likely to decline from recent and current levels over the next several years in association with the development and promulgation of SIPs for the 1-hour SO_2 NAAQS as well as the recent finalization of the Cross State Air Pollution Rule (CSAPR), also known as the Transport Rule. We also note that potential variability, more specifically increases, in emissions from new or modified sources would be addressed through the new source review (NSR) and prevention of significant deterioration (PSD) permitting process associated with implementation of the 1-hour SO_2 NAAQS.

Based on these considerations and supporting analyses using 5 years of NWS meteorological data, the EPA believes that the modeled design value based on the form of the 1-hour SO_2 NAAQS is the appropriate metric for use in this final rule and that the proposed remedy will be adequate to address

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Portland's significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey.

3. Emissions and Source Characteristics

Comment: GenOn commented that EPA's dispersion modeling used outdated stack parameters for units 1, 2, and 5 and submitted a list of revised parameters that it states should be used in the modeling.

Response: The EPA updated the stack parameters used in the final rule dispersion modeling, based on the submitted parameters from GenOn. The parameters include the stack heights, exit temperatures, exit velocities, and stack diameters. These updated stack parameters had a negligible effect on the modeled concentrations. See section IV.A for a table of the stack parameters used in the final rule modeling.

Comment: GenOn commented that interim and final SO_2 emissions limits should only be set for Portland units 1 and 2.

Response: The EPA agrees that interim and final SO_2 emissions are only needed for Portland units 1 and 2.

There were no comments supporting emissions limits for the smaller sources (units 3, 4, 5, and an auxiliary boiler) in the final rule. In fact, in both the original section 126 petition modeling and additional modeling submitted as comments on the proposal, NJDEP only included emissions from Portland units 1 and 2. In the final rule, the EPA is setting emissions limits for units 1 and 2 only.

4. Identification of Background Concentrations

As noted above in the summary of the EPA modeling for the proposed rule, and explained in more detail in the proposed rule Air Quality Modeling TSD, the EPA used background concentrations

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that varied by season and hour-of-day based on the 3-year average of the 99th percentile of the distribution of hourly SO_2 concentrations from the Chester, New Jersey, ambient monitor, located about 34 kilometers southeast of Portland, which represents the high end of the distribution of monitored background concentrations in the area.

Comment: GenOn submitted comments suggesting that the background concentrations used in the EPA modeling for the proposed rule based on the Chester, New Jersey, monitor were too high and likely included impacts from Portland emissions. GenOn also submitted revised background concentrations that were adjusted to remove hours for which Portland was potentially influencing the Chester, New Jersey, monitor, although GenOn did not provide any details regarding the methodology used for adjusting the monitored concentrations.

Response: As noted above in relation to comments on the meteorological data, incorporating background concentrations based on 3 years of monitoring data incorporates some elements of meteorological variability into the cumulative modeling demonstration, which further mitigates potential concerns regarding reliance on a single year of meteorological data in the dispersion modeling. Also, as demonstrated by NJDEP's trajectory analysis (NJDEP, July 30, 2010), we agree that it is likely that SO_2 impacts from Portland contributed to some of the high monitored concentrations at the Chester, New Jersey, monitor used to represent the background concentrations. Although use of the 99th percentile values by season and hour-of-day from the Chester monitor excluded some of the peak hourly SO_2 concentrations, the background concentrations are still likely to be somewhat conservative (high), but the EPA believes that this conservatism is appropriate in order to account for both meteorological variability that otherwise could not be explicitly accounted for, and low background levels from other sources that may contribute to ambient SO_2 levels in New Jersey. Furthermore, the differences between

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the background concentrations used in the EPA modeling analysis and the background concentrations submitted by GenOn were less than about 5 parts per billion (ppb) in most cases, and would have a negligible impact of about 0.5 percent on the remedy necessary to eliminate Portland's significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey.

5. Columbia Monitor Data and Analyses

As noted in the proposal, the Columbia air quality monitor in Warren County, New Jersey, is located approximately 1.2 miles (about 2 kilometers) northeast of Portland. The Columbia monitor has recorded concentrations over the 75 ppb 1-hour SO_2 NAAQS.[16] See 76 FR 19662. Since the monitor began operation on September 23, 2010, it has recorded numerous exceedances of the 1-hour SO_2 NAAQS. We noted in the proposal that exceedances of the NAAQS occurred when prevailing winds in the area came from the direction of Portland, NJDEP submitted a document dated March 4, 2011 titled, "Analysis of the Sulfur Dioxide Measurements from the Columbia Lake NJ Monitor which can be found in the docket, (See Docket ID EPA-HQ-OAR-2011-0081-0019). This document used wind trajectory analyses to find that Portland's units 1 and 2 were the likely cause of each high SO_2 episode at the monitor. We found these analyses to be consistent with our finding and modeling which predicts exceedances of the 1-hour SO_2 NAAQS in the vicinity of the Columbia monitor.

Comment: NJDEP submitted new SO_2 ambient data collected at the Columbia monitoring station located in Warren County, New Jersey. The monitor began collecting data on September 23, 2010, and measured exceedances of the 1-hour SO_2 NAAQS on 9 days through February 17, 2011. The NJDEP submitted a trajectory analysis which attempts to track the SO_2 emissions from Portland on days

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when exceedances were measured at the Columbia monitor. The NJDEP also submitted a new modeling analysis which attempted to model the impact of emissions from Portland at the Columbia monitor, using recent SO_2 CEMS emissions data from Portland and the Columbia ambient monitoring data. The NJDEP concludes that the monitoring data, trajectory analysis, and the modeling analysis support the EPA's proposed finding that Portland significantly contributes to nonattainment in New Jersey and is also consistent with the results of NJDEP's and the EPA's modeling analyses, showing a good correlation between the modeling analyses and monitoring data.

Response: The EPA agrees with many aspects of the analysis submitted by NJDEP. We agree that the trajectory analysis of the recent Columbia monitoring data supports the conclusion that the exceedances are primarily caused by emissions from Portland. The analysis shows that on the days examined, the winds are blowing from Portland towards the Columbia monitor, and the available CEMS data show large SO_2 emissions from Portland.[17]

The EPA also agrees that the modeling analysis submitted by NJDEP indicates good performance for AERMOD in representing the modeled concentrations at the Columbia monitor on the exceedance days in 2010. However, interpretation of the analysis is complicated by the fact that concurrent site-specific meteorology is not available during 2010 or 2011. The modeling analysis was therefore conducted with the 1993-1994 site-specific meteorology used for the proposed rule modeling which as noted above the EPA found to be a reasonable assumption. NJDEP used three different emissions assumptions in the modeling analysis. It concluded that AERMOD modeling based on allowable emissions gives the best agreement with monitored concentrations at Columbia. Since the

[16] See "Summary of 1-Hour SO_2 Monitoring Data from the Columbia Monitor in Warren County, New Jersey" TSD available in the docket, available in Docket ID EPA-HQ-OAR-2011-0081-0005.

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CEMS data show that Portland was operating well below allowable emissions during many of these exceedances, NJDEP contends that this implies that AERMOD is underestimating the modeled concentrations at the Columbia monitor. The EPA disagrees with this conclusion. As shown above in our response to comments regarding the use of CALPUFF versus AERMOD, we believe that the manner in which NJDEP ran AERMOD for this analysis contributed to the model underestimating concentrations in the vicinity of the Columbia monitor. Specifically, the use of the Portland site-specific meteorological data without the adjustments incorporated in the EPA AERMOD modeling analysis contributes to underestimating impacts in the vicinity of the Columbia monitor. Further details regarding the EPA analysis of the Columbia monitor are contained in the final rule Modeling TSD.

C. Modeling and Other Analyses to Determine Significant Contribution for the Final Rule

The EPA continues to believe that the AERMOD modeling analysis provides a more appropriate technical basis for this petition than the modeling submitted based on the CALPUFF model, as explained in this notice and in more detail in the final rule Modeling TSD.

The EPA's review of the NJDEP AERMOD analysis supports a finding that SO_2 emissions contribute significantly to nonattainment and interfere with maintenance of the 1-hour SO_2 NAAQS. However, we noted some technical concerns with the NJDEP modeling which may affect the degree to which emissions need to be reduced to be able to meet the 1-hour SO_2 NAAQS in New Jersey. Therefore, the EPA conducted an independent modeling assessment to confirm the finding of significant contribution and to help determine the necessary and appropriate emission limits for Portland units 1 and 2 (the EPA modeling analysis is described in more detail in section V and the final rule Modeling TSD).

[17] The NJDEP analysis also includes CEMS data from the nearby Martins Creek power plant which shows little or no SO_2 emissions from Martins Creek on the exceedance days examined.

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As part of the original petition, NJDEP also submitted a trajectory analysis of two particular episodes showing that elevated 1-hour SO_2 measurements at the Chester monitor in Morris County, New Jersey, were caused primarily by Portland. As described earlier, NJDEP also submitted an analysis (dated March 4, 2011) of recent SO_2 monitor data at the Columbia monitor in New Jersey, which includes a trajectory analysis for exceedance days[18] at the Columbia monitor and a modeling analysis of the impact of Portland SO_2 emissions on the Columbia monitor.

For the reasons discussed above, the EPA believes that the AERMOD analysis, submitted by NJDEP and modeled by the EPA, provides a reasonable basis for making a finding that emissions from Portland significantly contribute to nonattainment and interfere with maintenance in New Jersey and for quantifying the SO_2 emissions reductions needed to establish the final remedy emission limits. In addition, the trajectory analysis, monitoring data analysis, and the air quality monitoring data collected from the Columbia monitor in New Jersey are consistent with our finding of significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey. Our analysis for determining the final emission limits are presented in the next section.

V. Establishing the Emission Limits Necessary for the Remedy

In the proposed rule, the EPA conducted analyses to determine the emissions limits that would be necessary to permit Portland's continued operation under our section 126 finding. This section summarizes these analyses and discusses the comments and responses on the analyses, and our use of the analyses to establish the final remedy. It also discusses the selection of the appropriate time frame for the final remedy, as well as other issues that commenters raised concerning the final remedy.

[18] When the report was submitted, there were 9 days that exceeded the 1-hour SO_2 NAAQS, as of February 17, 2011. More recent data (downloaded from the NJDEP website at

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Continued operation of a major existing source subject to a section 126 finding is permitted only if the source complies with emission limits and compliance schedules established by the EPA to bring about compliance with the requirements in sections 110(a)(2)(D)(i) and 126 as expeditiously as practicable, but in no case later than 3 years after the effective date of the finding. Thus, to determine the appropriate remedy, the EPA must quantify the reductions necessary to eliminate Portland's significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey.

A. Quantification of Necessary Emissions Reductions

To calculate emissions reductions necessary to eliminate Portland's significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey for the proposed rule remedy, the EPA completed AERMOD modeling of Portland units 1, 2, and 5 using the 1993-1994 Portland site-specific meteorological data.[19] As detailed in section IV, the EPA continues to believe that AERMOD is the appropriate model to make a finding that emissions from Portland contribute significantly to nonattainment or interfere with maintenance, and to calculate the appropriate emission limits for Portland units 1 and 2. In applying AERMOD to establish the remedy for the proposed rule, the EPA made several adjustments to the meteorological inputs (compared to the NJDEP modeling) which it determined to be appropriate. As described in Section IV above, the EPA continues to believe the meteorological data and model setup modifications are appropriate and we are continuing

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http://www.njaqinow.net/Default.aspx) show that there have been 22 additional 1-hour SO_2 exceedance days at the Columbia monitor between February 18 and August 20, 2011.

[19] For completeness, the EPA included emissions from Portland unit 5 in the final rule dispersion modeling (but did not propose or finalize a revised emissions limit for unit 5). The unit 5 emissions were included in the analysis to verify that they did not impact the calculation of the final emissions limit. Due to our understanding that the other emissions sources (units 3, 4, and an auxiliary boiler) at Portland have negligible or zero SO_2 emissions, the EPA did not include those sources in the final rule modeling.

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to use the same modifications for the final rule AERMOD modeling. The EPA remedy modeling also includes background concentrations that vary by season and hour of day based on the 99th percentile ambient data from the Chester, New Jersey SO_2 monitor. The EPA believes the background concentration methodology to be reasonable and appropriately conservative, and is using this methodology in the final rule modeling.

The EPA AERMOD analysis used allowable SO_2 emissions rates for Portland units 1, 2, and 5 | long with stack parameters submitted by GenOn shown in Table V.A-1:

Table V.A-1

Source	Permitted Emission Rate (g/s)	Stack Height (m)	Stack Diameter (m)	Stack Temperature (K)	Stack Velocity (m/s)
Portland Coal Unit 1	733.3	121.31	3.15	418.1	32.86
Portland Coal Unit 2	1,121.0	121.82	3.84	406.0	34.19
Portland Turbine 5	12.0	42.67	6.10	821.5	36.60

The location of maximum SO_2 concentration impacts from Portland emissions were found to occur in a similar location as in the proposal modeling. Therefore, the same 100 meter receptor fine grid modeling domains were used in the final rule modeling. The controlling modeled design value impact from Portland in New Jersey based on the EPA's final rule modeling was 855.4 ug/m^3 which is the basis for quantifying the necessary emission reductions. This included a contribution from Portland units 1 and 2 of 815.0 ug/m^3, a monitored background concentration of 39.3 ug/m^3, plus a contribution of 1.1 ug/m^3 from Portland unit 5. See the final rule Modeling TSD for more information on the AERMOD setup and modeling results.

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B. Summary of the EPA's Proposed Remedy Analysis

In the proposed rule, the EPA calculated the emissions reduction needed to eliminate Portland's significant contribution to nonattainment based on the maximum modeled design value concentration in New Jersey. If the modeled concentration from Portland plus background is reduced to a level that is below the 1-hour SO_2 NAAQS, then all modeled violations of the NAAQS in New Jersey are eliminated. For the proposed rule, the emissions reduction needed to eliminate all modeled violations in New Jersey was used to define the elimination of significant contribution to nonattainment and interference with maintenance.

Based on the EPA modeling results, the EPA proposed that an 81 percent reduction in allowable SO_2 emissions from Portland units 1 and 2 was needed to reduce the Portland contribution plus background to below the NAAQS.

The EPA also evaluated the modeling results to determine if an emission limit could be set that combined the total emissions at units 1 and 2. In the proposal, the EPA determined that there are many different combinations of emissions limits for units 1 and 2 that could eliminate violations of the SO_2 NAAQS in New Jersey. However, the stack parameters (exit velocity and stack diameter) of units 1 and 2 are slightly different, which causes the maximum downwind impacts from each unit to occur at slightly different locations and at different times. In addition, the EPA proposed that Portland can comply with the emissions limits in several different ways (e.g., low sulfur coal, reduced operation of one or both units, and/or installation of post-combustion controls). Given all of the possible compliance options and interactions between the plumes from units 1 and 2, we were not able to effectively examine multiple compliance strategies for the proposal. Therefore, we proposed emissions limits based on an 81 percent reduction in allowable emissions at both units 1 and 2. This led to a proposed SO_2 emissions

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limit for unit 1 of 1,105 lb/hr (allowable emission rate of 5,820 lb/hr*0.19 [an 81 percent reduction]) and a proposed SO_2 emissions limit for unit 2 of 1,691 lb/hr (allowable emission rate of 8,900 lb/hr*0.19 [an 81 percent reduction]).

C. Summary of Comments and Responses Regarding the Remedy Modeling

Comment: One commenter noted that various methods to comply with an emissions limit (such as installation of a control device) may affect stack parameters such as exit temperature and exit velocity, which may affect the dispersion of emissions and downwind concentrations. The emissions limit was calculated using a simple "rollback" calculation which assumes that concentrations will be reduced in proportion to emissions.

Response: We agree with commenters that it is likely (though unknown at this time) that the strategy to comply with the final rule emissions limits will cause changes in stack parameters for units 1 and 2. In addition, we agree that this should be accounted for, but in the proposed rule, the EPA did not take into account the effect of operating load on stack parameters. The exit velocity is reduced when the plant is operating below full load. Based on information submitted by GenOn as part of its comments, the exit velocity could be reduced by as much as 50 percent when operating at or below 50 percent operating load (defined as percent of maximum heat input for each unit). To account for potential reduced plume rise and dispersion due to reduced load or control devices, the EPA ran several AERMOD sensitivity runs. We simulated the proposed remedy emissions rate for units 1 and 2 (1,105 lb/hr unit 1 limit and 1,691 lb/hr unit 2 limit) at 100 percent load, which resulted in a maximum design value concentration of 193.7 ug/m3 (which is below the 196.2 ug/m3 1-hour SO_2 NAAQS). We then ran AERMOD with the same emissions rates, but at reduced loads of 75 percent, 50 percent, and 25 percent. The exit velocity for the reduced load runs was reduced based on information submitted by GenOn. The

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reduced exit velocity led to reduced plume rise and dispersion and higher downwind maximum concentration impacts. The maximum concentrations at 75 percent, 50 percent, and 25 percent load were 227.3 ug/m^3, 264.3 ug/m^3, and 300.3 ug/m^3, respectively. These impacts all exceed the 1-hour SO_2 NAAQS. See the final rule Modeling TSD for more details on the sensitivity analysis.

In the final rule, the EPA will ensure that the NAAQS is protected (and therefore that significant contribution to nonattainment and interference with maintenance is eliminated) in two ways. First, in addition to the lb/hr emissions limit for each unit, we are finalizing a lb/mmBtu emissions limit to address modeled exceedances at reduced load. The lb/mmBtu limit is determined based on an equivalent lb/hr limit at 100 percent load for each unit. Meeting a lb/mmBtu will therefore have the effect of lowering the resulting lb/hr emissions rates at reduced loads. For example, emissions will be 25 percent lower than the lb/hr limit when operating at 75 percent load. This in turn will ensure that the NAAQS is protected at reduced loads. Modeling of emissions rates that are constrained by a lb/mmBtu limit shows that concentration impacts at reduced loads are always less than maximum concentrations at 100 percent load. See section VI for more details on the calculation of lb/mmBtu limits.

The second way that we are ensuring that the remedy will be protective of the NAAQS is by requiring GenOn, as part of the increments of progress requirements, to submit a modeling protocol and dispersion modeling analysis of its final compliance strategy. GenOn will be required to show that the final remedy, as actually implemented, including any changes to stack parameters that may have resulted from steps taken to meet the limits, will be protective of the NAAQS and therefore eliminate significant contribution to nonattainment and interference with maintenance in New Jersey. See section VI for more details on the increments of progress requirements and schedules.

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Comment: One commenter (GenOn) urged the EPA to set a combined emission limit for units 1 and 2 for both the interim limits and the final limits. GenOn submitted a modeling analysis which examined the effects of various permutations of the proposed interim limit. The commenter ran an AERMOD "reference run" with the proposed interim limit of a 50 percent reduction in allowable emissions at both units 1 and 2 (a total of 7,360 lb/hr). GenOn then ran two additional "sensitivity" runs; one with unit 1 running at its full allowable limit (5,820 lb/hr) and unit 2 at zero emissions and a third model run with unit 1 at zero emissions and unit 2 at 7,360 lb/hr (the combined limit at a 50 percent reduction from allowables). The results show that maximum design value concentrations from the sensitivity runs are less than the reference run. Therefore, GenOn argues that a combined limit will provide for air quality impacts that are equivalent to or better than the proposed individual unit limits.

Response: The EPA agrees that the operating scenarios that were modeled show that a combined limit can lead to air quality impacts that are equivalent to or better than individual limits. However, that is not true in all cases, particularly for the final emissions limits. For example, the EPA modeled the combined proposed remedy emission limits (2,796 lb/hr) individually at unit 1 and unit 2. Emitting 2,796 lb/hr from unit 2 (with no emissions from unit 1) was protective of the NAAQS (design value of 189.1 ug/m^3 at 100 percent load). However, emitting 2,796 lb/hr from unit 1 (with no emissions from unit 2) led to modeled violations at 100 percent load (225.2 ug/m^3). Due to the slightly different stack parameters of each unit, more emissions can be emitted through unit 2 without leading to a violation, compared to unit 1. Therefore, a combined emissions limit that is emitted completely from unit 1 is not protective of the NAAQS.

For this reason, based on the modeling analysis conducted by the EPA, we are not able to set a combined limit for the final remedy. (We discuss the separate question of a combined limit for the

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interim limit in section VII.) The final rule contains individual final limits that are specific to units 1 and 2. It is also clear from this simple analysis that any combined limit that would still be protective of the NAAQS across the full range of operating scenarios for units 1 and 2 and would necessarily be more restrictive than the 81 percent reduction on each of units 1 and 2. There are some combinations of emissions from units 1 and 2 which will be protective of the NAAQS and some that will not. The EPA is not able to model all possible combinations and then set a combined limit which is protective of the NAAQS in all cases. Should GenOn wish to have a higher limit at one of the units, in exchange for a lower limit at the other, or seek a combined limit that is protective of the NAAQS in all cases, there is an opportunity to petition the EPA for additional rulemaking to adopt alternative emissions limits, although we note that such rulemaking would require a notice and comment process. Further details are contained in section VII later.

Comment: NJDEP recommended that the final rule should require a 95 percent reduction to be phased in as soon as possible, in a time period shorter than 3 years. In support of these recommendations, NJDEP also noted that power plants in New Jersey will be required to achieve an emission rate of 0.150 lb/mmBtu by December 15, 2012, and that two facilities in New Jersey are already meeting this level.

Response: We note that section 126 does not give the Administrator discretion to establish emission limitations beyond the emission reduction necessary to eliminate Portland's significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey. Sections IV and V discuss comments on the appropriate air quality models, and modeling assumptions, data and results, and their effect on the choice of the specific limits for Portland units 1 and 2.

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Comment: The EPA received numerous comments generally noting the adverse health and environmental effects of SO_2 emissions and urging significant emission reductions of SO_2 from Portland, providing examples of the beneficial effects that would occur by reducing SO_2 emissions and, for these reasons, urging significant reductions.

Response: The EPA recognizes that there are potentially adverse health impacts from breathing SO_2 particularly for people who have respiratory illnesses, heart, or lung disease, older adults and children, and that SO_2 is a precursor to acid rain formation and fine sulfate particle formation that can also pose adverse health effects. These effects are taken into account in establishing the SO_2 NAAQS, and need not be revisited in this action. Therefore, this rule is directed at eliminating Portland's significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in the affected areas of New Jersey. Elsewhere in this section, we explain how we are using modeling to assure that we are establishing a remedy that eliminates significant contribution and results in emissions limits that are protective of the NAAQS.

D. The Final Remedy Limit

The EPA modeled a scenario using allowable emissions from Portland with 1 year of site-specific meteorological data. The maximum modeled 1-hour SO_2 design value in New Jersey was 855.4 ug/m^3. This included a contribution from Portland units 1 and 2 of 815.0 ug/m^3, a monitored background concentration of 39.3 ug/m^3, plus a contribution of 1.1 ug/m^3 from Portland unit 5. The final compliance emission limits must be set at a level that eliminates all violations of the 1-hour SO_2 NAAQS in New Jersey. Therefore, all modeled receptors must be below the level of the NAAQS (196.2 ug/m^3). The contribution from Portland can be reduced by reducing the SO_2 emissions from the Portland stacks, but the background concentrations cannot be reduced (they are held constant). Since the contribution from

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unit 5 is only 0.1 percent of the total contribution, a reduction in the unit 5 contribution would provide a negligible reduction to the modeled design value. Therefore, it can be assumed that unit 5 emissions do not need to be reduced, and the unit 5 concentration is added to the irreducible background value. The final compliance emission limit for the final rule is calculated as follows: ((Total modeled concentration) – (NAAQS – background))/(total modeled concentration).This formula will produce the percentage by which Portland must reduce its emissions from allowables in order to achieve compliance with the NAAQS in New Jersey. Thus, the actual calculation of Portland's contribution to nonattainment in New Jersey is ((814.9)-(196.2-40.4))/814.9, where 40.4 represents the contributions from monitored background and unit 5. This results in a reduction of 80.9 percent of allowable emissions from Portland units 1 and 2, which we round to 81 percent. In this calculation, only the contribution from units 1 and 2 is included in the total modeled contribution.

Therefore, we are finalizing an emissions limit based on an 81 percent reduction in allowable emissions at both units 1 and 2. This leads to a final SO_2 emissions limit for unit 1 of 1,105 lb/hr (allowable emissions rate of 5,820 lb/hr*0.19 [an 81 percent reduction]) and a final SO_2 emissions limit for unit 2 of 1,691 lb/hr (allowable emissions rate of 8900 lb/hr*0.19 [an 81 percent reduction]), which are the same as the proposed limits.

As discussed earlier in response to a comment, to account for operation at less than 100 percent load and/or changes in stack parameters, the EPA is also setting a lb/mmBtu emissions limit for units 1 and 2 in the final remedy. To determine the level, we calculated the lb/mmBtu value as the emissions rate that equates to the lb/hr limits for unit 1 and 2 when operating at full load. That is, for unit 1 the lb/mmBtu limit is calculated as the lb/hour limit of 1,105 lb/hour divided by the heat input capacity of

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1,657.2 mmBtu/hr, which equates to 0.67 lb/ mmBtu. For unit 2, the lb/hour limit of 1,691 lb/hour is divided by the heat input capacity[20] of 2511.6 mmBtu /hr also results in 0.67 lb/ mmBtu.

Compliance with the 0.67 lb/ mmBtu limitation is determined on a 30 boiler operating day rolling average basis. A "rolling" average means that a new 30-day average can be determined on any day of operation. Similar to the proposed Mercury and Air Toxics Standards (MATS) rule, the EPA clarifies that only the hours on "boiler operating days" are included in the averaging, and the 30-day averaging "zero values" from non-operating days are not included. We use the same definition of "boiler operating day" as for the proposed MATS; that is, a 24-hour period between midnight and the following midnight during which any fuel is combusted in the units. The EPA recognizes that a 30-day averaging period for the lb/ mmBtu limitation incorporates some variability, and that there will be hourly periods that exceed the 30-day average.

The EPA does not believe that these higher hourly values would lead to exceedances of the NAAQS for a number of reasons. First, at full or near-full load, compliance with the lb/hour limit will ensure emissions rates at or near 0.67 lb/mmBtu. Second, at significantly lower loads, Portland units 1 and 2 could emit at emissions rates somewhat greater than 0.67 lb/mmBtu and still meet the NAAQS. Accordingly, some variability within the 30-day averaging is accommodated, although the EPA expects the variability will be relatively small. For example, during 2010 the emission rate for Portland varied by only about 15 percent.

As a final check on the remedy, EPA ran AERMOD again with the above emissions limits on the Portland Plant's units 1 and 2 (and current allowable emissions from unit 5). At these emissions levels, all receptors in New Jersey had concentrations below the 1-hour SO_2 NAAQS. The maximum modeled

[20] Heat input capacities were from the Title V Permit No. 48-0006

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99th percentile (4th-highest) daily maximum 1-hour SO_2 concentration was 193.7 ug/m^3 (including a monitored background concentration of 39.3 ug/m^3).

E. Compliance Schedule for the Final Remedy Limit

Section 126(c) initially makes it unlawful for any major existing source to operate more than 3 months after a section 126 finding has been made with respect to it; yet also gives the Administrator authority to permit continued operation under certain conditions. Specifically, the statute provides that the Administrator "may permit the continued operation" of such a source beyond the end of the 3 month period "if such source complies with such emission limitations and compliance schedules (including increments of progress) as may be provided by the Administrator to bring about compliance with the requirements contained in section 7410(a)(2)(D)(i) of this title or this section as expeditiously as practicable, but in no case later than 3 years after the date of such finding." 72 U.S.C. § 7426(c).

Section 126, however, does not give the Administrator unlimited discretion when establishing emission limitations and compliance schedules. Instead, the statute provides that the emission limitations and compliance schedules must bring about compliance with the requirements of section 110(a)(2)(D)(i) of the Act "as expeditiously as practicable" but in no case later than 3 years from the date of the finding. The use of the phrase "as expeditiously as practicable" allows for consideration of the time needed to implement a compliance option in setting a compliance schedule. However, the length of time needed to implement any given compliance option depends on the particular compliance option to be implemented. Furthermore, the EPA recognizes that in some instances a source may choose to cease operation as its method of compliance. In the proposed rule, the EPA requested comment on the meaning of as "expeditious as practicable" in this context.

1. Proposed Compliance Schedule

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The EPA proposed to allow continued operation of Portland beyond 3 months provided that the facility operates in compliance with final emission limits within 3 years and with interim emission limits and procedural increments of progress. In this section we discuss our response to comments on the appropriateness of a 3-year deadline for the final limits (See section VI.A. below for further discussion of interim limits and other increments of progress).

2. Public Comments and the EPA's Responses

In the proposal, the EPA recognized both that the statute requires that any compliance schedule ensure compliance "as expeditiously as practicable" and also that, while the statute directs the EPA to establish emission limits and compliance schedules, it does not foreclose the EPA from allowing the source to select a compliance option. In the proposal, the EPA noted its desire to seek a balance between the statutory requirement of compliance "as expeditiously as practicable" and the goal of ensuring that the regulation does not unnecessarily limit the options available to the source to achieve compliance within the statutorily mandated time period. The EPA did not receive any comments specifically challenging the EPA's balanced approach to interpreting the statutory language. Accordingly, the EPA's final remedy in this rulemaking has been developed consistent with these goals.

Comment: The EPA received a general comment comparing the "as expeditiously as practicable" language in section 126 to our interpretation of that language in the MATS rule. The commenter suggests that we should always interpret "as expeditiously as practicable" to mean 3 years.

Response: While the EPA is permitting 3 years in this case, the commenter's interpretation is inconsistent with the language of section 126 because, by saying "in no case later than 3 years," the statute contemplates that compliance might be required sooner than 3 years.

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The EPA also received a number of specific comments on technical feasibility issues and other issues related to the 3-year compliance period for the final remedy. A number of commenters believed that a 3-year period was too generous and that Portland units 1 and 2 should achieve needed emissions reductions in a shorter time period. Other commenters questioned the feasibility of meeting the limits within 3 years and recommended that the EPA should harmonize the requirements of this rule with those of other rules regulating electric generating units (EGUs). The following sections discuss EPA's responses to the comments in each of these issue categories.

a. Technical feasibility.

Comment: Several commenters objected to the 3-year compliance period and recommend an abbreviated compliance schedule or a schedule that requires compliance with the final limits in less than a year. Some commenters believed that technologies necessary to achieve the emission reductions could be installed and operating within 1 year (for example, dry sorbent injection or DSI) or 2 years (dry scrubbing). Others cited the availability of very low sulfur coal, such as sub-bituminous coal from the Powder River Basin (PRB) in Wyoming, asserting that emission reductions could be achieved in a shorter time period than 3 years. Another commenter noted that the Keystone Generating Plant located in Pennsylvania installed a scrubber within 3 years, and reduced SO_2 emissions by 98 percent. One commenter cited the EPA estimates of a 24-27 month time period for dry and wet scrubbing, and recommended that we replace the 3-year requirement with a time period consistent with those estimates. Other commenters, including GenOn, were concerned that the proposed final limits could not be achieved within 3 years.

Response: We believe that 3 years represents an expeditious schedule for GenOn to meet the emissions limits for this rule. While we are not mandating any particular control technology or

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approach, the EPA believes that GenOn would have a number of possible options, which may need to be used in combination, to evaluate for compliance with the rule. These options could include, among others: (1) switching to very low sulfur coal as a number of facilities have undertaken as a result of the acid rain program and the Clean Air Interstate Rule, (2) switching to lower sulfur coal in combination with lower-capital cost technologies such as reagent injection of Trona or sodium bicarbonate, and (3) continued use of higher-sulfur coal in combination with dry scrubbing or wet scrubbing.

While the first option, switching to very lower sulfur coal such as Wyoming Powder River Basin (PRB) coal, may be a possibility for Portland, the EPA notes that the type of sub-bituminous coal that would be necessary to achieve the final remedy would have markedly different fuel and handling characteristics, necessitating changes not only in the coal handling and preparation operations but also to the boilers. Publications[21] discussing examples of the design changes necessitated by switching from bituminous to PRB coal are included in the docket for this rulemaking. The EPA believes that 3 years would be a reasonable time period to evaluate and accomplish all of the necessary operational changes.

The EPA believes the second option is available; that is, switching to somewhat lower-sulfur coal such as Central Appalachia coal (CAAP) to achieve some of the needed reductions, with the remainder of the reductions achieved through a reagent injection system achieving reductions of 50-60 percent. For the proposed rule, the EPA requested comment on its view that such a reagent injection

[21] See B. Exner, et al., Successful NOx Reduction and Conversion to Powder River Basin Fuel on Wall Fired Boilers, Foster Wheeler (1996), available on the web at: http://www.fwc.com/publications/tech_papers/files/TP_FIRSYS_96_01.pdf, and available at Docket ID EPA-HQ-OAR-2011-0081; R. Barnum, et al., Fuel-Handling Considerations When Switching to PBR Coals, Power (November/December 2001), available on the web at http://www.prbcoals.com/pdf/PRBCoalInformation/PRB-FuelHandling.pdf. and available at Docket ID EPA-HQ-OAR-2011-0081.

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system could be built within 1 year. The EPA agrees with comments that observed that, in virtually all cases where such reagent injection systems have been installed, the facility has also included a fabric filter for particulate controls. Accordingly, the EPA agrees with commenters that it would take longer than 1 year to accomplish any operational changes necessary to switch to somewhat lower sulfur coal, to install and operate the reagent injection system, and to install a fabric filter to replace or supplement the current particulate controls. Development of a system that adequately controls SO_2 and maintains acceptable levels of PM controls could likely not be achieved within a 1-year period, and most likely would take considerably longer. At the same time, the EPA disagrees with commenters who suggest that there are feasibility concerns for compliance within 3 years, the maximum amount of time provided for compliance under section 126. There are three steps to carrying out this control option: (1) operational changes related to changing the coal supply, including blending, (2) construction and operation of the reagent injection system, and (3) implementation of any changes necessary to ensure continued effectiveness of particulate controls. However, as proposed, we believe the first two steps are achievable in 1 year, but construction and operation of a fabric filter is also necessary, and this step could take up to 2 additional years.

The third option, under which Portland would install a dry or wet scrubber, likely would achieve a greater degree of control than necessary to meet the lb/hr and lb/mmBtu limits in this section 126 rule. The EPA recognizes that given investment decisions for the suite of regulations, including the Transport Rule, the present section 126 rule, and the upcoming MATS rule, Portland may choose to install these controls. If this option were selected, the EPA continues to conclude that these scrubber controls could be installed within 3 years. (Although such controls have been installed in 24-27 months, the EPA believes that it is reasonable to provide the full 3 years to permit Portland the time needed to evaluate its

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options.) We note, however, that in the Integrated Planning Model (IPM) which was used to evaluate the impacts of the Transport Rule, we did not forecast dry or wet scrubbing as the least-cost option for compliance for the Portland facility. Rather, the IPM predicted a switch to lower-sulfur bituminous coal in combination with reagent injection. IPM model results are available in the Transport Rule docket at EPA-HQ-OAR-2009-0491-4440 (http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2009-0491-4440), and on the EPA's website at http://www.epa.gov/airmarkets/progsregs/epa-ipm/transport.html.

b. Continued operation of facility in the interim period.

Comment: The NJDEP commented that if significant reductions cannot be made expeditiously, Portland should not be allowed to operate, and that the burden to justify any operation beyond 90 days should be on the Portland facility owners and operators.

Response: The EPA disagrees with the commenter's recommendation that Portland be required to shut down pending implementation of emissions controls. Under section 126 of the CAA, the statute permits the continued operation if the source complies with emission limitations and compliance schedules established by the Administrator. The EPA is including emissions limits and compliance schedules in this rule sufficient to expeditiously eliminate Portland's signification contribution. The EPA does not believe that the statute mandates that the source cease operation at the 90-day milestone under these circumstances. The statute's explicit recognition that the compliance schedules must be "practicable" suggests that it is reasonable for the Administrator to permit continued operation consistent with such compliance schedules and emissions limitations.

c. Harmonization with Other Requirements.

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Comment: Some commenters urged the EPA to defer action on the section 126 petition to enable the EPA to harmonize the schedule and requirements for this rule with requirements of other pending and final rules. Those commenters believed that harmonization with these rules, including the MATS rule and the Transport Rule, would enable GenOn greater opportunity for fully informed investment decisions that take into account all of the applicable regulations.

Response: The EPA is sensitive to the desirability and advantages of harmonized regulatory requirements. We understand that Portland's actions to address its significant contribution to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS are occurring in relatively close proximity to actions it may take to address its contribution to nonattainment and interference with maintenance of the 1997 ozone NAAQS and the 1997 and 2006 $PM_{2.5}$ NAAQS under the recently-finalized Transport Rule, as well as actions it may need to take to address its emissions of Hazardous Air Pollutants under the forthcoming MATS rule. We recognize the value for GenOn in having the ability to make informed investment decisions that optimize strategies for addressing these pollutants concurrently.

The EPA notes that, in contrast to when this rule was initially proposed, the final requirements of the Transport Rule are now known. Pennsylvania is one of the states whose facilities are subject to the Transport Rule which establishes an emissions budget for Pennsylvania, allocates allowances to facilities in Pennsylvania, including Portland, and allows Portland's owners to trade those allowances with other power plants through an allowance trading market. Portland allowances for 2012 and 2014 are listed in a technical support document to the final Transport Rule located at http://epa.gov/airtransport/pdfs/UnitLevelAlloc.pdf. There are, however, a number of differences between this rule addressing section 126 of the CAA and the requirements of the Transport Rule. First,

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in addressing NJDEP's section 126 petition related to ambient 1-hour SO_2, the EPA must ensure that the SO_2 emissions from Portland do not significantly contribute to nonattainment, or interfere with maintenance of the 1-hour ambient SO_2 standard of 75 ppb, a relatively localized pollutant source-oriented, in New Jersey. In contrast, the Transport Rule addresses SO_2 emissions in the context of downwind $PM_{2.5}$ problems, a highly transported pollutant, in many states. As a result, this section 126 rule does not provide for emissions trading with other facilities, while the Transport Rule does allow for such trading. Second, the schedule for the Transport Rule is somewhat different from this rule. Under the Transport Rule, Portland must show for 2012 (that is the calendar year January through December) and subsequent years that it holds allowances sufficient to cover its annual emissions. These requirements for 2012 precede the requirements for this section 126 rule, which requires the source to meet interim emissions limits within 1 year (early 2013) with 3-year requirements taking effect in early 2015. Notwithstanding these differences, which stem from the different CAA requirements being addressed, we believe that with the finalization of this rule, Portland has the information it needs to make an informed decision on how to comply with both rules.

At this time, the MATS rule is not final. The EPA has proposed the MATS rule and is under a consent decree deadline to complete that rule by December 16, 2011. The proposed MATS rule contained proposed requirements for hazardous air pollutants, including existing sources of acid gases (e.g., hydrogen chloride). The MATS rule does not directly regulate SO_2 but in the proposal the EPA provided its assessment that the acid gas requirements of the proposed MATS would have substantial SO_2 co-benefits. While the date of this section 126 rule does not exactly coincide with the date for the final MATS, these two rules are expected to take effect within a short time of each other. Accordingly,

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the EPA believes that GenOn will have the information it needs to make an informed decision on how to meet both this final rule and the MATS.

Even if the schedules did not coincide so closely, the EPA does not believe it would be appropriate to defer action on NJDEP's section 126 petition to achieve such harmonization. The EPA is required by the CAA to take action on NJDEP's petition within 60 days (plus a 6 month administrative extension granted in this case), and this time period has already passed. We could not delay lawfully this rulemaking by any significant time period to coincide with the date for the final MATS rule. The EPA also notes that full harmonization is limited by statutory constraints. While there is some flexibility within section 112 of the CAA to provide for a 4-year compliance period under certain circumstances, this flexibility is not afforded under section 126. Under section 126, the EPA cannot alter the statutory requirement that the source eliminate its significant contribution to nonattainment and interference with maintenance within 3 years of the section 126(b) finding. Notwithstanding these constraints, as previously noted, our expectation is that requirements for MATS, like those of the Transport Rule, will be known in time to allow for consideration of integrated strategies for compliance with MATS, the Transport Rule, and the present section 126 action.

3 The Final Rule

Based on the above considerations, we are retaining the 3-year compliance date for the final limit. Adopting a substantially shorter time frame than 3 years could not only restrict the options for Portland to achieve the necessary reductions, but could render each of them impracticable within that time frame. Because shorter time frames have the effect of narrowing the available options, we are retaining the 3-year compliance date for the final limit.

F. Other Considerations for Establishing the Final Remedy

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1. Economic Feasibility

Comment: Several commenters stated that the importance of the Portland facility to the local economy should be taken into account, and that we should not take an action that causes operations at Portland units 1 and 2 to be no longer economically viable. These commenters contend that there are limits to the costs the facility can withstand and remain in operation, and that the facility should be allowed to meet interim and final limits in the most cost-effective and efficient manner possible. Commenters expressed concerns regarding the practicality of expending high costs on scrubber installation considering the size and age of the units at Portland, and questioned the feasibility of replacing Portland units 1 and 2 with comparable combined-cycle natural gas-fired units.

Response: The EPA stresses that in carrying out the statutory obligation to address the SO_2 exceedances caused by the Portland facility, we are doing so in a way that meets those obligations but is not overly prescriptive. We allow the facility owners to choose the most cost-effective solution. While there are many factors, some completely unrelated to this rule, which may impact the long-term operation of the facility, the EPA is striving to provide opportunities for flexible solutions to address section 126 of the CAA. In particular, the rule does not mandate, nor do we expect, the Portland owners and operators to install high capital-cost options suggested by commenters, such as wet scrubbing or replacement with combined-cycle natural gas units (although the rule also does not rule them out as options). The source would more likely choose the control technology best suited to achieving the required emission limits, including the most cost-effective technology for the facility. It is also useful to note that in the EPA's IPM modeling of the effects of the Transport Rule over a wide region, the model predicted that less than 0.5 percent of capacity would be lost as a result of the rule. While these models are less reliable in assessing plant-specific conditions, the EPA believes that the general indication of

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minimal capacity loss, together with the availability of less capital-intensive control options, suggest that Portland can achieve the needed reductions without substantially affecting the economic viability of the plant.

2. Requirement for Continuous Monitoring.

Comment: One commenter suggested that the EPA should add a requirement in the final rule to require Portland to operate CEMS for SO_2 emissions at the plant.

Response: The EPA acknowledges the importance of CEMS to ensure compliance with emissions limits. However, GenOn is already required to operate CEMS to monitor SO_2 emissions at Portland in accordance with requirements in 40 CFR Part 75. Our regulations for monitoring SO_2 emissions from power plants with CEMS require the owner or operator to ensure that all CEMS are in operation and monitoring unit emissions at all times the affected unit combusts any fuel. Regulations in Part 75 provide limited exceptions during periods of calibration, quality assurance, or preventative maintenance, but do not provide any exemptions for startup, shutdown, or malfunction of the combustion unit. The EPA concludes that the CEMS already required for Portland under Part 75 provide sufficient monitoring for compliance determinations for SO_2 emissions at Portland, and for the final rule we refer to part 75 as the primary method for determining compliance.

3. Delegation of Enforcement.

Comment: One commenter suggested enforcement of any emissions limits or other restrictions on Portland related to this section 126 action should be delegated to the NJDEP as New Jersey is the downwind receptor of emissions from Portland.

Response: Ensuring that the Portland facility complies with the requirements of the CAA including the provisions of this final rule is the responsibility of the EPA. It will ultimately become the

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joint responsibility of the EPA and of the Pennsylvania Department of Environmental Protection (PADEP), because PADEP has primary responsibility for implementing and enforcing the Pennsylvania SIP. The EPA notes that CAA section 110(a)(2)(D)(ii) requires Pennsylvania's SIP to "ensure compliance with the applicable requirements of section 7426***of this title" (i.e., section 126 of the CAA). Because these requirements must become part of the SIP for Pennsylvania, they will be subject to enforcement in the same manner as any other requirement of a SIP. This includes the ability of third parties to raise challenges under the citizen suit provisions of section 304 of the CAA. Thus, New Jersey and its citizens will have ample opportunity for enforcement under these provisions of the statute.

VI. Increments of Progress

This section discusses issues concerning whether and how EPA should establish appropriate increments of progress toward the final remedy. The statute does not define "increments of progress." The EPA has discretion to define appropriate increments of progress on a case-by-case basis. The increments of progress required in a particular case may vary depending on the facts of the petition but should provide incremental progress towards eventual compliance with the requirements of section 110(a)(2)(D)(i). Section VI.A discusses interim emission limits, and section VI.B discusses reporting milestones during the 3-year period for the final remedy.

A. Interim Emission Limits

As noted previously, section 126 allows the EPA to allow continued operation of a source beyond a 3-month time period if the source complies with "emissions limitations and compliance schedules (including increments of progress). In this section we discuss issues related to whether the increments of progress should include interim emissions limits and the final rule requirements for progress milestones and reports.

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1. What the EPA Proposed

The EPA proposed interim emission limits for Portland units 1 and 2. Specifically, the EPA proposed to require Portland to meet an SO_2 emissions limit of 2,910 lb/hr for unit 1 and 4,450 lb/hr for unit 2 within 1 year. These unit-specific emission limits represented 50 percent of the allowable emissions rate for each unit that was used for the EPA air quality modeling. The EPA proposed these interim reduction requirements because section 126 calls for "increments of progress," and because we believed that there were readily achievable interim steps that could be accomplished in this instance. In the proposal, the EPA discussed its evaluation of available SO_2 emission reduction options for meeting the interim emissions limits such as reagent injection, switching to lower sulfur coal and load shifting. The EPA requested comment on the proposed interim reduction requirements for units 1 and 2, on the achievability of the limits in the 1-year time period proposed, and on the impact of the reductions on the reliability of the grid.

2. Public Comments and the EPA's Responses

a. Appropriateness of Including Interim Emissions Limits.

Comment: One commenter, GenOn, asserted that the EPA should not establish interim limits because those interim requirements may be inconsistent with the requirements of the Transport Rule or MATS requirements. Moreover, the same commenter believed that because the EPA has discretion not to impose interim emissions limits under section 126(c), and because of this need for long-term harmonization with the Transport Rule, MATS and other requirements, the EPA is not justified in imposing the interim emissions limitations.

Response: The EPA disagrees with comments that the EPA should exercise discretion provided by section 126 and remove the interim emissions limits from the final rule. As noted later in this section

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in our discussion of other GenOn comments, we believe that there are readily available measures for Portland to make significant progress in the short term that in no way impede or conflict with achievement of the 3-year limits. Additionally, based on our assessment of the steps necessary to achieve these limits, implementation of these interim measures would complement, rather than conflict with, the measures needed for meeting this rule as well as the Transport Rule and MATS.

b. Technical Feasibility of Coal Switching.

Comment: In its comments, GenOn recommended that, should the EPA retain the interim emissions limitations, the EPA should defer them until GenOn can undertake necessary coal test burns to determine what limits are reliably achievable. GenOn comments further stated that it may be able to meet interim emissions limits if a reasonable time table and level is set based upon coal test burn results, but that a full evaluation of the practicality of interim limits was not possible by the June 13, 2011, deadline for public comments. GenOn indicated its intent to conduct initial coal testing by September 15, 2011. Finally, to provide GenOn with greater flexibility, GenOn requested that the EPA revise the form of any interim limits for Portland units 1 and 2; that is, the EPA should establish the limits as combined emissions limits for the total emissions from units 1 and 2 rather than establishing limits that would apply to each unit.

Subsequent to the close of the comment period, GenOn submitted a report of the September 15, 2011, test burn referred to in its comments. For the final rule, the EPA took this test burn report into consideration. In the test burn, Portland blended its existing Northern Appalachia coal supply with varying amounts of low sulfur Central Appalachia coal from West Virginia. For each unit, the test burn assessed the impacts of varying blending cases on the unit's generator output, the reduction in SO_2 emissions, and the effect on the performance of the electrostatic precipitators. The test burn report also

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noted facility changes in coal handling, feeder, and hopper systems that would be needed to allow for routine use and blending with lower sulfur coal in the future.

In its comments, and in the later test burn report, GenOn commented that, based on initial evaluations of the coals economically available to be used to meet the proposed interim emission limits, the use of lower sulfur coal is projected to cause significant production derates at Portland units 1 and 2. That is, GenOn asserted that the total megawatts (MW) of electricity output from the plant would decrease if GenOn were to use a lower sulfur coal blend sufficient to meet the interim limits.

Response: The EPA considered the test burn report along with other information relevant to the establishment of an interim limit. We continue to strongly believe that significant reductions in SO_2 emissions can be achieved within 1 year. We do not disagree that, aside from a reduction in electrical output, the use of lower sulfur coal may indeed be the only viable option to meet interim limits at Portland. The EPA, however, remains convinced that lower sulfur Appalachian coals are readily available for use at Portland. This opinion is supported by recent Central Appalachian thermal coal quality and production data from Wood Mackenzie, published in April 2011. According to Wood Mackenzie data, Central Appalachian production of thermal coal in 2010:

- had a mean SO_2 content of about 1.5 lb/mmBtu, which could allow a significant SO_2 emission reduction from current coal usage, with ample margin to accommodate typical coal quality variations;
- had a mean higher heating value of nearly 12,600 Btu/lb, which is likely well within 10 percent of the heating value currently used at Portland; and
- amounted to about 130 million tons, including amounts that are about 50 times any possible maximum annual demand for low sulfur coal from Portland.

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The EPA is aware that changes in the characteristics of the coal (moisture content, ash content, grindability, etc.) used at Portland could change the performance of the Portland units. Although GenOn indicates that equipment modifications would be necessary to maintain the use of 100 percent CAAP coal for a sustained period of time, the EPA notes that during the test burn with 100 percent CAAP coal, the generator output for unit 1 is relatively close to rated capacity (162 versus 171 MW, approximately 5 percent). Also the EPA notes that it is not unusual for installation of air pollution controls to result in a modest de-rate, and the EPA does not believe that maintenance of 100 percent of current output should be seen as a constraint on the appropriateness of the interim limits. In addition, the test burn report, which evaluated one particular coal supply, is silent on the availability of a potentially more costly Central Appalachia coal that would allow each Portland unit to maintain closer to full load, and what boiler upgrades are necessary to improve generator output. The EPA is also aware of proven measures that the EPA believes can be applied relatively quickly to enhance PM control at Portland if needed due to coal switching, so as to meet a new, lower interim SO_2 emission limit while continuing to meet all other existing emissions limits. Two such measures include various upgrades to Portland's electrostatic precipitators (ESP) and/or use of flue gas conditioning, both of which have been routinely used by coal plant operators to improve or maintain ESP performance when switching to a lower sulfur coal that might impact performance.

The EPA has reviewed the information from GenOn on the possible equipment changes, and has also reviewed our previous determinations of the time needed to accomplish those changes. The EPA's engineering judgment is that these changes can be accomplished within 1 year.

c. Interim Limits Suggested by the GenOn Test Burn Report.

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Comment: Based on the results of the test burn report, GenOn concluded that (1) sustained unit operations using a blend of Northern and Central Appalachia coals sufficient to achieve a 25 percent reduction in allowable SO_2 emissions is achievable with a modest investment and an implementation schedule of 6 months, and (2) sustained unit operations using a blend of Northern and Central Appalachia coals to achieve a 35 percent reduction in allowable SO_2 emissions should be achievable with additional investments and an implementation schedule of 8 to 12 months after GenOn has established an operational record and completed equipment performance evaluations at the 25 percent reduction blend level, and any necessary permits are acquired.

Response: The EPA evaluated the suggested interim reductions in the GenOn test burn report. The EPA concluded that based upon this evaluation, these targets are significant underestimates of the readily available interim emissions reductions, represent very minimal reductions from current operations, and are inconsistent with the results of the test burn.

Figure VI.C-1 shows the hourly SO_2 emissions for all of 2010 at Portland, shown as the sum of emissions from units 1 and 2. For the EPA (and GenOn's) air quality analysis, the assumed allowable emissions rates for units 1 and 2 were 5820 lb/hr and 8900 lb/hr, respectively, resulting in a total allowable rate of 14,720 lb/hour. A 25 percent reduction from this amount, that is a 25 percent reduction from current allowable, thus becomes 11,040 lb/hr. As shown in Figure VI.C-1, during 2010, Portland's hourly emissions exceeded 75 percent of allowable emissions only rarely. Accordingly, a 25 percent reduction in allowable emissions effectively represents status quo operations. A 35 percent reduction in allowable emissions, or 9,568 lb/hr, would require at most a roughly 15 percent reduction in current emissions. EPA continues to believe that the facility can make much more significant reductions in line with the final interim limits within a year.

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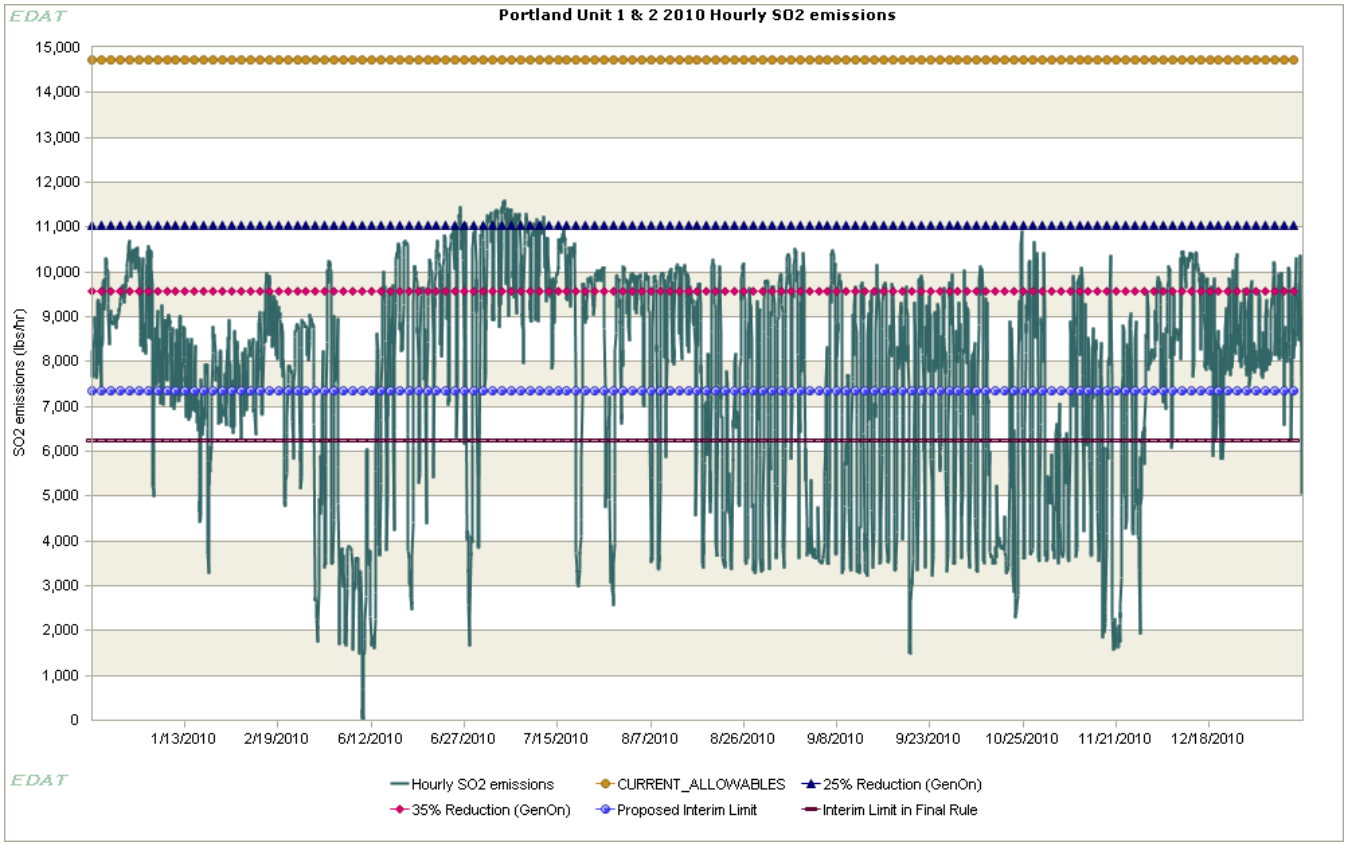
Figure VI.C-1. Comparison of 2010 Emissions from Portland Units 1 and 2 with Allowable Emissions and Different Levels of Reduction from Allowable Emissions.



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d. Load Shifting.

Comment: GenOn commented on the EPA's assessment that the proposed interim limits could be met via "load shifting." GenOn disagreed with the EPA's assessment that load shifting is a viable option to meet an interim limit. In its comments, GenOn interpreted the term "load shifting" as referring to the ability of a utility to continue to serve its customer load obligations by reducing utilization or "load" from a selected generator and increasing the output at other facilities owned by the same utility: the load is "shifted" to other generators that the company operates. Because GenOn's Portland plant is a merchant plant that operates in a competitive, centrally cleared and dispatched, Independent System Operator (ISO) market, GenOn noted that replacement energy likely would come from one of GenOn's competitors, and it is possible that Portland's production would be "shifted" to a less efficient unit that might have higher emissions than Portland units 1 and 2. Additionally, as a "capacity resource owner," GenOn is required under the Pennsylvania-New Jersey-Maryland Interconnection (PJM) tariff to bid the Portland units into the PJM energy market every day and make the units available to generate unless specific circumstances, such as a unit outage, arise that precludes operation of the plant.

Response: The EPA agrees that the proposed rule could have used a clearer term than "load shifting" in describing the possible ways the interim emissions limits could be met. The EPA appreciates the distinction that GenOn makes in regard to load shifting within a utility's own assets versus load shifting in a competitive market. The EPA did not mean to imply in its brief mention of load shifting that we reached a conclusion that GenOn would merely shift any load reduction at Portland to another GenOn facility. Rather, our use of the imprecise term "load shifting" was referring to the ability of Portland to reduce its operation as a way to meet the interim lb/hr limits, or as a partial solution to meet the limits in combination with other approaches. The EPA recognizes the open market aspects of the

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PJM energy market including the probability that the load can shift to other operators. These market realities are characterized in detail in the models we use to forecast the effect of EGU regulations on the utility industry. In response to Portland's observation that the facility that replaces Portland's output could be higher-emitting, the EPA observes that while its output would likely be more expensive than Portland's energy, there is a good possibility that the energy would be replaced with a scrubber or a gas-fired unit, either of which could have much lower emission rates than Portland, given the relatively high emission rate from Portland. As an older relatively uncontrolled plant, much of the generation capacity would be expected to emit less per unit of generation than the Portland facility.

e. One-year Time Period.

Comment: One commenter, NJDEP, believed that the 1-year period allowed for too much time for the Portland facility to meet interim emissions limits, and that the interim limits were insufficiently stringent. NJDEP in their comments urged the EPA to ensure that we require interim reductions no less than 80 percent within 90 days.

Response: The EPA disagrees with this comment. An 80 percent reduction would represent nearly the 81 percent reduction required by the 3-year limits in the final rule. As discussed in section VI.A above, we believe that the 3-year period is an "expeditious" schedule for emissions reductions of this magnitude, and that this level of reduction would not be achievable in a 90-day time period.

Comment: Another commenter, PADEP, noted that if the proposed 50 percent reduction in the maximum allowable SO_2 emissions can only be achieved by the installation of sorbent injection technology, the 1-year deadline for complying with the interim limit does not provide sufficient time for permitting, purchasing, and installing the technology. Therefore, in lieu of setting specific interim emission limits and deadlines, PADEP recommended that the EPA work with NJDEP, GenOn, and

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PADEP, as the permitting agency, to establish emission interim emission limits and compliance schedules containing increments of progress consistent with CAA section 126(c).

Response: The EPA believes that this approach would not be consistent with the statute. Under section 126, the Administrator is to set the emission limits and compliance schedules, and must accomplish these through a notice and comment rulemaking. While we have considered the comments of all the parties noted by the commenter, it would not be appropriate for the EPA to defer the compliance schedules to a future negotiation with the source owner and states.

On the other hand, as discussed previously in section V.E, the EPA does agree with the commenter, and with others who made similar observations, that reagent injection may not be achievable within 1 year because Portland may need to upgrade its particulate matter collection equipment. Accordingly, we no longer believe that reagent injection alone serves as a technical basis for the interim emissions reduction requirements in the final rule. Nevertheless, after analyzing the comments regarding the feasibility of switching to cleaner coal and the necessary time frame for doing so, we do believe that this is an appropriate basis for the interim limit. Thus, the EPA has determined that it is feasible for Portland to achieve interim reductions within 1 year that would achieve significant progress toward the final remedy limits, would not interfere with Portland's progress toward meeting those final limits, and would result in important public health benefits in the interim.

f. Effect of Interim Limits on Reliability.

Comment: In response to the EPA's request for comments on the effects of the interim limits on electric reliability, one commenter noted that Portland is uniquely situated to supply power to the PJM power interconnection from a location close to the source of demand, that power transmissions coming from the Midwest are hampered by long distance transmission losses, and that transmission lines are

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already approaching overload. Another commenter, NJDEP, indicated that the 400 MW generated by the plant is relatively small compared to PJM's current total capacity of 163,500 MW. NJDEP also concluded that it is unlikely that these units would be needed to prevent brownouts or blackouts, but that in the unlikely event that these units are necessary, the EPA could include a condition that the units may only be run when called on by PJM to provide power during a Maximum Emergency Generation Event.

Response: The EPA agrees that given large reserve margins, we do not expect that the interim limit will cause adverse effects on electricity reliability. The EPA notes that the test burn reports cited above show that at worst, in meeting the interim limits the facility would be projected to continue operating under a small derate, and given the significant reserve margin noted by the commenters, continued operation of Portland at an occasionally lower rate would not be expected to have an adverse effect on the PJM system's ability to deliver needed power. Consequently, the EPA does not believe it is necessary to make any provision for use of Portland to address potential emergency events.

g. Clear Rationale for Limits.

Comment: One commenter, PADEP, noted its view that while section 126 expressly provides for increments of progress, there is no provision in the CAA to suggest that a 50-percent reduction must be made within 1 year of a finding. Without the EPA fully explaining the rationale for these proposed interim emission reductions and timelines, this commenter believed the EPA's interim requirements could be viewed as arbitrary and capricious.

Response: EPA has discretion under section 126 to establish reasonable interim emissions controls. For reasons discussed above, the EPA has a clear rationale for the interim emissions limits in the final rule. These limits are based upon the ready availability of coal with a sulfur content of 1.5 lb/

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mmBtu. We have reviewed the data on existing coal supplies, carefully reviewed information on available technologies, and established the interim limits based upon that review.

h. Combined Emission Limits.

Comment: GenOn requested in its comments that any interim emissions limits for Portland units 1 and 2 should be expressed as a combined limit for the two units, rather than on a unit-by-unit basis.

Response: The EPA agrees with GenOn that for the interim limits, a substantial "increment of progress" towards meeting the ultimate (in this case, 3-year) limit is achievable regardless of whether the emissions limit is expressed as a combined limit or on a unit-by-unit basis. Accordingly, for the final rule, we are adopting an interim limit that will be a single combined limit, rather than separate limits, for units 1 and 2. As with the 3-year limit, the EPA will evaluate compliance based on available test data including Part 75 CEMS data. The EPA believes that the combined limit will provide GenOn with greater flexibility to implement a variety of combinations of options to satisfy the interim limit, which should in turn serve to reinforce the EPA's view that there are readily available measures for Portland to employ in meeting the interim emissions reduction requirement.

The EPA notes that for the interim emissions reduction, unlike the 3-year limit, there is no explicit air quality goal defined by the Act. For the 3-year limit, it is essential that the limit ensure that Portland fully eliminates its significant contribution to nonattainment and its interference with maintenance of the 1-hour SO_2 NAAQS. For the interim reductions, however, the goal is to establish "increments of progress" towards meeting emissions limits that fully comply with section 126. Accordingly, for the 3-year limit, the EPA concluded it was essential for the final rule to include lb/mmBtu limits to ensure that the NAAQS were protected at all loads. However the EPA determined that it was not necessary to include similar lb/mmBtu limits for the interim limits. We also determined

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that establishing lb/mmBtu limits in the interim might unnecessarily restrict Portland's flexibility in the interim, since the 1-year compliance deadline already constrains the available options to meet such a limit.

3. Final Rule Interim Emission Limits

For the final rule, the EPA includes a combined interim limit of 6,253 lb/hour for the total SO_2 emissions from units 1 and 2.

The basis for the final limit differs from the proposed rule. For the proposal, the EPA calculated the unit-by-unit proposed limits as 50 percent of the allowable emissions rate used for the EPA air quality modeling. We believe that for the final rule it is preferable to base these interim limits on coal characteristics of readily available coal supplies. For the final rule, the combined interim limit is based on the EPA's assessment that coal with sulfur content of 1.5 lb/mmBtu is readily available and its use at Portland is achievable within 1 year. Using this 1.5 lb/mmBtu value as the basis for the calculation of the combined interim limit, we calculated[22] the limit as follows:

For Unit 1: 1657.2 mmBtu/hr X 1.5 lb/mmBtu = 2486 lb/hr

For Unit 2: 2511.6 mmBtu/hr X 1.5 lb/mmBtu = 3767 lb/hr

Total combined emission rate = 6253 lb/hr

We agree with the commenters who feel strongly that this interim limit is very important to include in the final rule, not only because it drives progress toward the final remedy, but also because of the air quality and public health benefits that will be realized in the interim. While the limit is not calculated based on specific air quality criteria, these readily available interim reductions will serve to markedly reduce the number of days with SO_2 violations in New Jersey, and will serve to greatly reduce

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SO_2 concentrations on days with remaining violations. We do not know what specific approach Portland will use to comply with the interim limit, so we cannot quantify the decrease in SO_2 concentrations at specific locations, but we do note that the interim limits will result in significant SO_2 emissions reductions within the first year and make important progress toward the elimination of SO_2 violations within 3 years. These limits represent a 46-percent decrease from peak 2010 actual emissions. Moreover, the most significant reductions will occur during the hours when the emissions are the highest. During 2010, more than 40 percent of the hours that Portland operated resulted in emissions that exceeded 6253 lb/hr. The interim limit will ensure that such high emissions during those times are eliminated.

B. Increments of Progress: Reporting Milestones

1. What the EPA Proposed

In addition to the proposed 3-year and 1-year emissions limits, the EPA proposed a schedule of milestones that must be achieved to provide assurance that the source is on track to achieve full compliance as expeditiously as practicable and no later than the 3-year deadline.

Those proposed milestones were:

3-month notification: Within 3 months of the EPA's finding, the EPA proposed that GenOn notify the EPA whether it will cease to operate within that period or whether it will continue to operate subject to the emission limitations and compliance schedules in the final rulemaking. If Portland plans to continue to operate subject to these limits, the EPA proposed to require Portland to indicate how it intends to achieve full compliance with the emission limits. Specifically, we proposed that Portland must indicate whether it intends to cease or reduce

[22] Heat input capacities of 1657.2 and 2511.6 mmBtu/hr are those listed in the title V permit for Portland

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operation at any emission unit subject to emission limits as its method of compliance with such limits. If this 3-month notice indicated that Portland intends to continue operation, the proposed rule required the remaining reporting requirements also be satisfied.

Modeling protocol and analysis: No later than 3 months from the date of the section 126 finding, we proposed that GenOn submit to the EPA a modeling protocol (including all units at Portland in the protocol), consistent with our Guideline on Air Quality Models. If the EPA identified deficiencies in the modeling protocol submitted by the source, we proposed to require Portland to submit a revision to correct any deficiencies within 15 business days. We proposed to require that Portland submit a modeling analysis in accordance with the approved protocol within 6 months.

Status reports: We proposed to require GenOn to submit, beginning 6 months after the section 126 finding and continuing every 6 months until the final compliance date, a progress report on the implementation of the remedy, including status of design, technology selection, development of technical specifications, awarding of contracts, construction, shakedown, and compliance demonstration.

Interim project report: We proposed to require GenOn to submit within 1 year an interim project report demonstrating compliance with the 1-year limits.

Final project report: We proposed to require GenOn to submit, within 3 years, a final project report which demonstrates compliance with the emission limits in the final rulemaking. We proposed that this final report include the date when full operation of controls was achieved at

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units 1 and 2.

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Portland after shakedown; as well as a minimum of 1 month of CEMS data demonstrating compliance with the emission limits in the final rulemaking.

2. Public Comments and the EPA's Responses.

One commenter, GenOn, objected to both the 90-day compliance plan and the periodic status reports. The commenter believed that requiring a detailed plan 90 days after the final rule is unnecessarily restrictive, particularly given that GenOn will not have fully evaluated its compliance options under MATS. Similarly, GenOn believed that detailed status reports are not justified and will limit GenOn's flexibility to revise its compliance strategy in response to other state and federal regulations. Because the regulatory environment is fluid with further changes expected, GenOn expressed concerns that the compliance plan and status reports should not restrict GenOn's ability to revise its strategy for compliance with section 126 as circumstances change.

One commenter believed that the schedule for a required modeling protocol within 3 months was overly ambitious and suggested the owner and operator of Portland should have at least 6 months to submit a modeling protocol for Portland's SO_2 emissions.

3. Final Rule Reporting Milestones

For the final rule, the EPA has amended the proposed requirement for GenOn to develop a compliance plan with an identified remedy with 90 days. The EPA agrees with GenOn that it is very possible that complete information to inform this remedy may not be available within 90 days of the rule's effective date. The EPA does, however, believe that in order to implement controls it is reasonable to assume that information necessary for a decision will be available within 12 months of the effective date, and accordingly we have retained the requirement but have postponed the deadline until 12 months after the effective date of the final rule. The EPA acknowledges the commenters' point that there are

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factors over time that could lead to a revised decision after the 12 month milestone. Even if such factors lead to a different eventual remedy, the EPA believes that it is nonetheless reasonable to require a status report on GenOn's intent at the 12 month point in order to ensure that planned actions for compliance with the requirements of section 126 are on track.

The EPA has also retained the requirements for 6 month status reports. We disagree with comments that these reports are not justified. The status reports required by this rule are warranted not only because section 126 requires "increments of progress," but in addition the EPA believes these are necessary for the EPA and the states to monitor Portland's efforts to achieve compliance with the emission limits established in this rule. The status reports are not exhaustive, but will provide important information to the agency and to the public to monitor Portland's progress towards the ultimate goal of reducing its SO_2 emissions and reducing its impact on New Jersey's compliance with the 1-hour SO_2 NAAQS.

We have also retained the requirement for the interim and final progress reports. For the final rule, we have extended the deadline for the final project report by two months to provide time for evaluation of CEMS data before submitting the report.

In the final rule, we have retained the requirement to submit a modeling protocol and modeling, but, after consideration of the timing concerns raised by commenters, we have amended the deadlines. For the final rule, the modeling protocol is required within 6 months of this rulemaking and the final modeling within 12 months. The revisions to the interim compliance schedule outlined in this section are all logical outgrowths of the compliance schedule originally proposed as they were made in response to consideration of the comments received in response to that proposal.

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VII. Alternate Compliance Schedule and Consideration of Petition for Rulemaking for Alternative Emission Limits

In this section, we discuss two additional overarching issues on which we sought comment in the proposal. First we discuss our decision regarding the proposed consideration of an alternative schedule based upon Portland's decision to meet its compliance obligations by electing to shut down unit 1 or unit 2, or both. We then discuss the potential for additional rulemaking to accommodate alternative remedies from those established in this rule.

A. Alternate Compliance Schedule If the Source Owner Opts to Cease Operations

1. What the EPA Proposed

In the preamble to the proposed rule, the EPA discussed why different remedies for meeting the requirements of section 126 may suggest different compliance schedules, 76 FR 19678. In particular, the EPA noted that if GenOn decided to cease operation of the Portland facility, it is possible that implementing such a remedy "as expeditiously as practicable" may have different considerations than if it decided to undertake a schedule of constructing and implementing control technologies. Consistent with this perceived possibility, the EPA requested comment in the proposal on how to interpret the phrase "as expeditiously as practicable" when the source owner and operator has elected to cease operation as its method of compliance with the emissions limit for a given unit and cessation cannot occur within 3 months of the EPA's finding. The EPA noted that if appropriate based upon comments, the EPA would consider including in the final rule an alternate compliance schedule for this possibility, and the EPA requested comment on relevant factors that should be considered were we to include such an alternate schedule.

2. Public Comments and the EPA's Responses

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Comment: One commenter stated that if the facility elected to close, it must be required to cease operation immediately, as there is no basis to allow the plant to continue to significantly contribute to nonattainment and interference with maintenance of the 1-hour SO_2 NAAQS in New Jersey. Another commenter suggested that if Portland plans to cease operations of the coal burning units, shutdown should occur within 3 months of the EPA's final rule.

Response: The EPA notes that section 126(c) of the CAA allows the EPA to permit continued operation beyond 90 days if the source complies with emissions limitations and compliance schedules established by the Administrator. This language does not, however, mandate that any decision to cease operation must occur in any particular time period when the source is otherwise complying with the required emission limits compliance schedules. The EPA disagrees with commenters suggestion that any decision to shutdown must occur immediately or within 90 days. For the final rule, the EPA concludes that the final and interim emission limits and reporting milestones are sufficient for all selected remedies, including a remedy under which GenOn would choose to ultimately cease operation at one or more units. The EPA has made this conclusion because compliance with the interim and final emission limits, regardless of how the plant chooses to comply, results in the elimination of Portland's significant contribution to the affected areas in New Jersey and demonstrates appropriate interim progress towards such elimination.

3. The Final Rule

The EPA has retained the approach in the proposed rule, and we have not included an alternative compliance schedule in the case that the selected remedy is to cease operation of unit 1 and/or unit 2. The EPA did not receive any information in comments that leads the EPA to conclude that a different schedule is necessary.

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B. Consideration of Petition for Rulemaking for Alternative Emission Limits

The EPA received comment from GenOn arguing that the unit-specific SO_2 limits for unit 1 and for unit 2 did not provide GenOn with sufficient flexibility. Accordingly, GenOn recommended that the EPA change the form of the final emissions limits to a combined emissions limit for the total emissions from units 1 and 2. In this way, they asserted GenOn would be able to evaluate a broader suite of remedies which could possibly include remedies with equivalent air quality impacts at substantially reduced cost.

The EPA understands the source's request for operational flexibility, and we considered the option suggested by GenOn. However, based on the modeling analysis conducted by the EPA, we are not able to set a combined limit for the final remedy. The final rule contains individual final limits that are specific to units 1 and 2. There are some combinations of emissions from units 1 and 2 which will be protective of the NAAQS and some that will not. Air quality modeling results indicated that there are many possible scenarios under which a combined limit, of similar stringency to the limits adopted, would lead to exceedances of the 1-hour SO_2 NAAQS. In particular, given the multiple possibilities of available controls for the two units, there would be a large number of possible stack configurations with different dispersion characteristics. While the EPA perhaps could have developed a combined limit with sufficient stringency to ensure that all significant contribution and interference with maintenance would be eliminated under every possible combination of control options and stack configurations, the EPA does not believe that this approach would provide the flexibility that GenOn is seeking because the combined limit would likely need to be much more stringent than the limits in the final rule.

Nevertheless, we acknowledge the greater operating flexibility that an alternative set of emission limits might offer, and we note that in some cases an appropriately constrained combined limit may be

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possible to construct in a way that is protective of the NAAQS (e.g., more stringent than the sum of the individual limits). Should GenOn wish to have a higher limit at one of the units, in exchange for a lower limit at the other, or seek a combined limit that is protective of the NAAQS in all cases, the source may petition the EPA for additional rulemaking to adopt alternative emissions limits if such petition demonstrates that the proposed alternative would eliminate all emissions at Portland that significantly contribute to nonattainment or interfere with maintenance of the 1-hour SO_2 NAAQS in New Jersey by the 3-year deadline established in this rule. As part of the interim reporting requirements, the rule requires GenOn to submit a modeling analysis, pursuant to a modeling protocol that it is consistent with the data and methods the EPA used to develop this rule, which shows that the final compliance remedy is protective of the NAAQS. If GenOn chooses to submit such a petition, the EPA expects GenOn to provide a demonstration, in the course of conducting the modeling analysis required by the rule, that shows that a specific alternative set of emissions limits for unit 1 and unit 2 would also be protective of the 1-hour SO_2 NAAQS in New Jersey. In order for the EPA to consider such a rulemaking petition, GenOn would need to submit, no later than the 1-year deadline for submitting modeling results under the rule, any proposed alternative limits along with air quality modeling, consistent with the approved modeling protocol, demonstrating that the proposed alternative limits would, at all operating loads, eliminate Portland's significant contribution to nonattainment and interference with maintenance in New Jersey. If the EPA determines it would be appropriate to propose approval of the alternative emission limits, the EPA would conduct a notice and comment rulemaking on the proposed alternative.

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

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This action will grant the NJDEP petition and is making a CAA section 126 finding. This type of action is exempt from review under Executive Orders12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. Burden is defined at 5 CFR 1320.3(b). Under the Paperwork Reduction Act, a ''collection of information'' is defined as a requirement for ''answers to * * * identical reporting or recordkeeping requirements imposed on ten or more persons * * *.'' 44 U.S.C. 3502(3)(A). Because the rule applies to a single facility, Portland, the Paperwork Reduction Act does not apply. See 5 CFR 1320(c).

C. Regulatory Flexibility Act (RFA)

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this rule

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will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities because small entities are not subject to the requirements of this rule.

D. Unfunded Mandates Reform Act of 1995 (UMRA)

This rule does not contain a federal mandate that may result in expenditures of $100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The cost necessary to comply with the limits in this notice are not expected to exceed $100 million. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA.

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. The requirements for compliance in this rule will be borne by a single, privately owned source.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The rule primarily affects the private industry, and does not impose significant economic cost on state or local governments or preempt state or local law. Thus, Executive Order 13132 does not apply to this action.

In the spirit of Executive Order 13132, and consistent with the EPA's policy to promote communications between the EPA and state and local governments, the EPA specifically solicited comment on the proposed action from state and local officials.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

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This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It does not have a substantial direct effect on one or more Indian Tribes. Furthermore, this action does not affect the relationship between Indian Tribes and the federal government, or distribution of power and responsibilities between the federal government and Indian Tribes. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it does not involve decisions on environmental health or safety risks that may disproportionately affect children. The EPA believes that the emissions reductions in this rule will further improve air quality and will further improve children's health.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is an exempted action under Executive Order 12866.

I. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the U.S.

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The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

The agency has also reviewed this rule to determine if there is existing disproportionately high and adverse human health or environmental effects on minority or low-income populations that could be mitigated by this rulemaking. An analysis of demographic data illustrates that the population residing near the source is represented by fewer minority and low-income residents than either the surrounding counties, the average demographic composition of the states of New Jersey and Pennsylvania, and national averages. In addition, this rule increases the level of environmental and public health protection for all affected populations since, when fully implemented, it will result in attainment of the health-based 1-hour SO_2 NAAQS. The results of the demographic analysis are presented in the supporting document titled, "Environmental Justice Assessment for Section 126 Petition from New Jersey Regarding SO_2 Emissions from the Portland Generating Station" (September 2011), a copy of which is available in the docket EPA-HQ-OAR-2011-0081.

J. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer Advancement Act of 1995 (NTTAA), Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impracticable. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The

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NTTAA directs the EPA to provide Congress, through OMB, explanations when the agency decides not to use available and applicable VCS.

This action does not involve technical standards. Therefore, the EPA did not consider the use of any VCS.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S.C. 804(3). The EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability. Nonetheless, this action will be effective **[INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER**].

L. Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit Court within 60 days from the date the final action is published in the Federal Register. Filing a petition for review by the Administrator of this final action does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review must be final, and shall not postpone the effectiveness of such action.

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Thus, any petitions for review of this action related to the section 126 finding must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date final action is published in the Federal Register.

List of Subjects in 40 CFR Part 52

Approval and promulgation of implementation plans, Environmental protection, Administrative practice and procedures, Air pollution control, Incorporation by reference, Intergovernmental relations, and Reporting and recordkeeping requirements, Sulfur dioxide.

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Dated:

_____

Lisa P. Jackson,
Administrator.

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For the reasons set forth in the preamble part 52 of chapter I of title 40 of the Code of Federal regulations is amended as follows:

PART 52 - [AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

Subpart NN-- Pennsylvania

2. Section 52.2039 is added to read as follows:

§52.2039 Interstate transport.

The EPA has made a finding pursuant to section 126 of the Clean Air Act (the Act) that emissions of sulfur dioxide (SO_2) from the Portland Generating Station in Northampton County, Upper Mount Bethel Township, Pennsylvania (Portland) significantly contribute to nonattainment and interfere with maintenance of the 1-hour SO_2 national ambient air quality standard (NAAQS) in Morris, Sussex, Warren, and Hunterdon Counties in New Jersey. The owners and operators of Portland shall comply with the requirements in paragraphs (a) through (d) of this section.

(a) The owners and operators of Portland shall not, at any time later than one year after the effective date of the section 126 finding, emit SO_2 (as determined in accordance with part 75 of this chapter) in excess of 6,253 pounds per hour (lb/hr) for unit 1 (identified with source ID 031

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in Title V Permit No. 48-0006) and unit 2 (identified with source ID 032 in Title V Permit No. 48-0006) combined;

(b) The owners and operators of Portland shall not, at any time later than three years after the effective date of the section 126 finding, emit SO_2 (as determined in accordance with part 75 of this chapter) in excess of the following limits:

(1) 1,105 lb/hr and 0.67 pounds per million British Thermal Unit (lb/mmBtu) for unit 1; and

(2) 1,691 lb/hr and 0.67 lb/mmBtu for unit 2.

(c) The owners and operators of Portland shall comply with the following requirements:

(1) Perform air modeling to demonstrate that, starting no later than three years after the effective date of the section 126 finding, emissions from Portland will not significantly contribute to nonattainment or interfere with maintenance of the 1-hour SO_2 NAAQS in New Jersey, in accordance with the following requirements:

(i) No later than six months after the effective date of the section 126 finding, submit to the EPA a modeling protocol that is consistent with the EPA's Guideline on Air Quality Models, as codified at 40 CFR Part 51, Appendix W, and that includes all units at the Portland Generating Station in the modeling.

(ii) Within 15 business days of receipt of a notice from the EPA of any deficiencies in the modeling protocol under paragraph (d)(1)(i) of this section, submit to the EPA a revised modeling protocol to correct any deficiencies identified in such notice.

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(iii) No later than one year after the effective date of the section 126 finding, submit to the EPA a modeling analysis, performed in accordance with the modeling protocol under paragraphs (c)(1)(i) and (c)(1)(ii) of this section, for the compliance methods identified in the notice required by paragraph (c)(2) of this section.

(2) No later than one year after the effective date of the section 126 finding, submit to the EPA the compliance method selected by the owners and operators of Portland to achieve the emissions limits in paragraph (b) of this section.

(3) Starting six months after the effective date of the section 126 finding and continuing every six months until three years after the effective date of the section 126 finding, submit to the EPA progress reports on the implementation of the methods to achieve compliance with emissions limits in paragraphs (a) and (b) of this section, including status of design, technology selection, development of technical specifications, awarding of contracts, construction, shakedown, and compliance demonstrations as applicable. These reports shall include:

(i) An interim project report, no later than one year after the effective date of the section 126 finding, that demonstrates compliance with the emission limit in paragraph (a) of this section.

(ii) A final project report, submitted no later than 60 days after three years after the effective date of the section 126 finding, that demonstrates compliance with the emission limits in paragraph (b) of this section and that includes at least one month of SO_2 emission data from Portland's continuous SO_2 emission monitor,

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and that includes the date when full operation of controls was achieved at Portland after shakedown.

(4) The requirements in paragraphs (c)(1) and (c)(3) of this section shall not apply if the notice required by paragraph (c)(2) of this section indicates that the owners and operators of Portland have decided to completely and permanently cease operation of unit 1 and unit 2 as the method of compliance with paragraphs (a) and (b) and with section 126 of the Act.

(d) Compliance with the lb/mmBtu limitations in paragraph (b) of this section is determined on a 30 boiler operating day rolling average basis. Boiler operating day for the purposes of this paragraph means a 24-hour period between midnight and the following midnight during which any fuel is combusted in the units identified in paragraph (a) of this section.

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